



Massachusetts Military Reservation

PLUME RESPONSE PROGRAM

FINAL TECHNICAL MEMORANDUM SECOND QUARTERLY SAMPLING ROUND SECOND ANNUAL MONITORING PERIOD

EASTERN BRIARWOOD AND WESTERN AQUAFARM GROUNDWATER MONITORING PROGRAM

March 1998

*Prepared by:
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FINAL TECHNICAL MEMORANDUM
Second Quarterly Sampling Round
Second Annual Monitoring Period
Eastern Briarwood and Western Aquafarm Groundwater Monitoring Program

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ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Environmental Excellence (Brooks AFB)
CLP	Contract Laboratory Program
CPRP	Comprehensive Plume Response Plan and Schedule
DO	dissolved oxygen
DSR	Data Summary Report
EDB	ethylene dibromide (1,2 dibromoethane)
EPA	U.S. Environmental Protection Agency
ETR	extraction, treatment, and reinjection
FTA	Fire Training Area
IRP	Installation Restoration Program
MCL	maximum contaminant limit
MMR	Massachusetts Military Reservation
MTBE	methyl tert butyl ether
PCE	tetrachloroethylene (also called perchloroethene, tetrachloroethene)
PFSA	Petroleum Fuel Storage Area
PID	photoionization detector
PME	Performance Monitoring Evaluation
PQL	practical quantitation limit
QA/QC	quality assurance/quality control
QPP	Quality Program Plan
SD	Storm Drain
SERGOU	Southeast Regional Groundwater Operable Unit
TCE	trichloroethylene (also called trichloroethene)
TRET	Technical Review and Evaluation Team
VOCs	volatile organic compounds

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1.0 INTRODUCTION

The Eastern Briarwood and Western Aquafarm groundwater monitoring program supports the Air Force Center for Environmental Excellence (AFCEE) Installation Restoration Program (IRP) at the Massachusetts Military Reservation (MMR) on Cape Cod, Massachusetts. The U.S. Department of Defense is committed to the successful remediation of contamination caused by past operations and waste management practices at the MMR that present a risk to public health and the environment.

The U.S. Air Force is the lead agency in the execution of the IRP. The *Strategic Plan, Massachusetts Military Reservation Installation Restoration Program* (AFCEE 1996b) reflects the assignment of AFCEE as manager of the IRP. As part of the Strategic Plan, AFCEE developed a comprehensive plume response plan and schedule (CPRP) that is both technically sound and logistically aggressive. The plan responds to the MMR-generated soil and groundwater contamination and the potential impacts of proposed remedial actions on the hydrology, ecology, and human health of the local area. In addition, the plan provides for the direct involvement of local, state, and federal agencies as well as the general public. The CPRP details the actions specified in Amendment No. 1 of the Federal Facilities Agreement (AFCEE 1996b). As a means of establishing and maintaining remediation progress, the CPRP also reflects the recommendations of the Technical Review and Evaluation Team (TRET) and the Joint Process Action Team.

The Eastern Briarwood and Western Aquafarm Monitoring Program addresses the steps necessary to monitor contamination in the Eastern Briarwood and Western Aquafarm plume areas, where long-term monitoring was specified in the CPRP. Jacobs Engineering Group Inc. has been contracted by AFCEE to prepare and execute this monitoring program.

This technical memorandum presents the data collected during the second quarterly sampling round of the second annual monitoring period completed in December 1997 at

Eastern Briarwood and Western Aquafarm plume areas, where a total of 31 existing groundwater monitoring wells were sampled for volatile organic compounds (VOCs). This is the first sampling round conducted according to the modifications presented in the *Final First Annual Comprehensive Report, Eastern Briarwood and Western Aquafarm Monitoring Program* (AFCEE 1998a).

1.1 MONITORING PROGRAM OBJECTIVES AND SCOPE

Based on historical data, natural microbial degradation is probably occurring within these plumes, and the TRET-recommended confirmatory monitoring is the only activity currently necessary for these plumes. Therefore, the primary objective of the Eastern Briarwood and Western Aquafarm plume monitoring program is to monitor the groundwater by quarterly sampling of existing wells in these areas. This program documents changes in contaminant concentrations, monitors the lateral and downgradient extent of contamination, and tracks any future migration of contaminants. Wells located adjacent to the Quashnet River in the Eastern Briarwood area are also sampled to provide information as to the possibility of contaminant discharge into the Quashnet River. The scope of this monitoring program also includes evaluating the analytical information, and characterizing the plume and surrounding areas.

Twenty groundwater wells in the Eastern Briarwood area and eleven groundwater wells in the Western Aquafarm area were sampled for this second quarterly, second annual monitoring round.

1.2 TECHNICAL MEMORANDUM ORGANIZATION

This technical memorandum provides a review of the program objectives and scope (Section 1.0); a summary of the monitoring wells sampled, associated field activities, field parameter measurements, and analytical findings for the quarterly sampling event (Section 2.0); and references cited (Section 3.0). Included as Appendix A is the data summary report (DSR) which identifies laboratory samples and discusses field and

laboratory quality assurance/quality control (QA/QC) findings and data validation. The complete listing of validated analytical results from the Jacobs data management system for samples collected at the Eastern Briarwood and the Western Aquafarm areas are included in Appendix B. Appendix C contains the field sampling data forms completed by the field crews during sampling activities.

For this second year of monitoring, a technical memorandum containing analytical results of the completed sampling programs will be submitted for the first, second and third quarterly sampling periods. These quarterly technical memoranda will be reviewed, and the data will be presented in a comprehensive report (following the fourth quarterly sampling round) with interpretive plume maps and cross-sections that assess groundwater contamination. Any modifications to the monitoring program that are warranted will be recommended in the second annual report. The fourth quarterly sampling event is currently scheduled to be completed June 17, 1998, and the *Draft Second Annual Comprehensive Report* is due on September 4, 1998.

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2.0 GROUNDWATER SAMPLING PROGRAM

The second quarterly, second annual groundwater sampling round was conducted in conformance with the *Final Eastern Briarwood and Western Aquafarm Groundwater Monitoring Plan* (AFCEE 1996a) with modifications presented in the *Final First Annual Comprehensive Report, Eastern Briarwood and Western Aquafarm Monitoring Program* (AFCEE 1998a). This sampling was conducted from November 24, 1997, through December 15, 1997, at 20 wells in the Eastern Briarwood area and at 11 wells in the Western Aquafarm area.

Groundwater sampling was conducted by low-flow sampling methodology in accordance with MMR technical procedure Tech-015, Groundwater Purging and Sampling (AFCEE 1998b). This procedure is based on U.S. Environmental Protection Agency (EPA), Region I Low-Flow Groundwater Sampling Standard Operating Procedures (EPA 1996). All wells (except well 00MP0571) were sampled using a Grundfos Model Redi-Flo 2 submersible pump with Teflon sampling hose set in the middle of the screened interval. The 00MP0571, a Solinst multi-point well located in the southern portion of the Eastern Briarwood area, was sampled by three-volume purge sampling methodology using a peristaltic pump with dedicated Teflon sampling tubing. Field water quality parameters of groundwater were measured using a YSI model 6820 multi-purpose water quality meter with a flow-through cell while purging the wells. Prior to sampling, six parameters were monitored to establish aquifer stabilization. These parameters were temperature, specific conductance, pH, turbidity, dissolved oxygen, and oxidation-reduction potential. Specific equipment requirements, sampling procedures, and well stabilization criteria are outlined in the monitoring plan (AFCEE 1996a).

Groundwater samples were analyzed for VOCs by CLP/OLC-02.1 by Quanterra Environmental Services of Tampa, Florida, a Massachusetts-certified laboratory. Field QA/QC samples were collected as specified in the Quality Program Plan (QPP) (AFCEE 1998b). Duplicate samples were collected at one per each 10 or fewer samples collected; equipment rinsate samples were collected at one per each 10 or fewer samples collected;

matrix spike/matrix spike duplicate samples were collected at one per 20 or fewer samples collected; and trip blanks were submitted with each cooler shipped containing VOC samples. Field QA/QC and analytical validation findings are presented in Appendix A.

Laboratory analytical methods for groundwater and QA/QC samples collected during the monitoring program are listed in Table 3-3 of the *Final Eastern Briarwood and Western Aquafarm Groundwater Monitoring Plan* (AFCEE 1996a). In the same document, Table 3-5, a detailed analyte list for VOCs with their respective practical quantitation limits is presented. Sample dilutions may in some cases increase practical quantitation limits above maximum contaminant limits.

2.1 QUARTERLY GROUNDWATER FINDINGS

All groundwater samples collected this quarter in wells from the Eastern Briarwood (Figure 2-1) and Western Aquafarm (Figure 2-2) areas were analyzed for VOCs. During sampling, all wells were checked for well-head integrity, security, total depth, and static water levels. The well headspace was monitored for compounds detectable with a photoionization detector (PID) with a 10.6 eV lamp. All intended wells were sampled; no unusual circumstances were noted during this second quarterly, second annual field sampling round, and no non-conformance reports were submitted.

Monitoring well characteristics and field measurements taken prior to purging and sampling in the Eastern Briarwood and Western Aquafarm areas are presented in Tables 2-1 and 2-2, respectively.

2.1.1 Eastern Briarwood Field Parameters

Prior to sampling, the wells were purged by low-flow methodology. The final three field water quality parameters obtained from the YSI instrument demonstrated that stabilization had been achieved (Table 2-3) and a sample of true formational water could

be collected. The PID readings (Table 2-1) were initially high for headspace of two wells (MAMW0515A and 00MW0570B) upon opening the well caps in order to collect samples; however, subsequent readings decreased and stabilized to zero. Negative turbidity values (Table 2-3) were obtained from four wells (37MW0002, 00MW0542C, 00MW0570A, and 00MW0570B). This is attributed to air bubbles on the screen of the turbidity probe or inaccurate zero calibration. Stabilization of these four wells was based on the other five parameter readings; therefore, a representative groundwater sample was obtained from each well. The field data forms used to record well conditions and field parameters for the Eastern Briarwood monitoring wells are presented in Appendix C.

2.1.2 Eastern Briarwood Analytical Findings

Contaminants detected during the second quarterly, second annual groundwater sampling round at the Eastern Briarwood area are presented in Table 2-4. For reference, corresponding results from the first quarterly, second annual groundwater sampling round are also presented in Table 2-4. Four previously installed wells (MAMW0512A, MAMW0512C, MAMW0515A, and 00MW0539A) were added to the sampling program this quarter to increase vertical aquifer monitoring and to determine baseline aquifer conditions in this area (AFCEE 1998a). Fifteen monitoring wells previously sampled in the Eastern Briarwood area were removed from the program this quarter. Monitoring wells 37MW0004, MAMW0512D, MAMW0515D, 00MW0539C, 00MW0542A, 00MW0544A, 00MW0544B, 00MW0545, 00MW0562C, 00MW0568 and 00MP0571C had no detections of VOCs or EDB or very low detections of VOCs during the first annual sampling period and will continue to be monitored semiannually (AFCEE 1998a). Shallow monitoring wells, MAMW0512E, MAMW0515C, 00MW0536C, and 00MP0571E were replaced with more appropriately screened wells (AFCEE 1998a). The DSR is presented in Appendix A, and a complete listing of analytical results for the second quarterly, second annual sampling round at the Eastern Briarwood area is included in Appendix B.

The data reported herein have been compared to the results from the first annual sampling period and to the historical data associated with the site (Table 2-5). Most of the historical sampling data from the upgradient (northern) portion of the Eastern Briarwood plume was acquired in 1990 and 1995; much of the data from the downgradient (southern) area originates from 1995 sampling (OpTech 1996). The contaminants identified as detections in Table 2-4 of this document were previously reported at the same order of magnitude as the historical results (Table 2-5).

Constituent concentrations from two wells in the Eastern Briarwood area exceeded federal maximum contaminant levels (MCLs) for safe drinking water. Trichloroethene (TCE) was detected at concentrations that exceeded the federal MCL (5 µg/L) in groundwater from two wells, 00MW0567 and 00MW0569, at concentrations of 5.9 µg/L and 13 µg/L, respectively. These concentrations were greater than concentrations detected in the previous sampling round but were within the range of concentrations detected historically (Table 2-5). No other wells in the Eastern Briarwood area had contaminant concentrations that exceeded MCLs for this second quarterly, second annual round of sampling.

TCE, tetrachloroethylene (PCE), cis-1,2-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, and chloroform were detected at concentrations below MCLs (Table 2-4) in groundwater from 10 wells in the Eastern Briarwood area. Contaminant concentrations detected during this second quarterly, second annual sampling round were generally within the range of concentrations detected during the first annual sampling period. Slight increases in contaminant concentrations include TCE in well 00MW0570B; PCE in wells 00MW0531 and 00MP0571A; cis-1,2-dichloroethene in wells 00MW0569 and 00MW0570B; 1,1,1-trichloroethane in well 00MP0571A; and chloroform in well 00MW0544C. Slight decreases in contaminant concentration include TCE in well 00MW0561; PCE in wells 98MW0001, 37MW0002, 00MW0542C, and 00MW0562A; cis-1,2-dichloroethene in well 00MW0567; and 1,1,1-trichloroethane in well 00MW0562A.

TCE was detected in 00MW0570B at a concentration of 4.7 µg/L which was the fourth consecutive detection of TCE in this well. TCE was not detected for the last four quarterly sampling rounds in 00MW0570A; this well had TCE concentrations above MCLs for the first two quarterly sampling rounds. TCE was detected in three additional wells, MAMW0512A, 00MW0530, and 00MW0561, at concentrations of 0.93J µg/L, 0.79J µg/L, and 1.4 µg/L, respectively. TCE concentrations were generally within the range of concentrations detected during the previous quarterly sampling round.

TCE, PCE, cis-1,2-dichloroethene, 1,1-dichloroethane, and xylene were detected at concentrations below practical quantitation limits (PQLs) in groundwater from 5 wells in the Eastern Briarwood area (Table 2-4).

Seven monitoring wells had no detections of VOCs for this second quarterly, second annual monitoring round. These seven wells include MAMW0512C, MAMW0515A, 00MW0537B, 00MW0539A, 00MW0543, 00MW0544D, and 00MW0570A.

2.1.3 Western Aquafarm Field Parameters

Prior to sampling, the wells were purged by low-flow methodology. The final three field water quality parameters measured by the YSI instrument demonstrated that stabilization had been achieved (Table 2-6) and a sample of true formational water could be collected. The PID readings (Table 2-2) were initially high for headspace at one well (39MW0004) upon opening the well cap in order to collect samples; however, readings decreased and stabilized to zero. Negative turbidity values (Table 2-6), which were obtained from four wells (39MW0004, 28MW0020, MAMW0514C, and 00MW0527) were attributed to air bubbles on the screen of the turbidity probe or inaccurate zero calibration. Negative dissolved oxygen (DO) values (Table 2-6) were obtained from two wells (39MW0002 and 28MW0020). These wells historically have had very low DO values. Negative readings may be indicative of a reducing environment or can be attributed to inaccurate zero calibration. The field data forms used to record well conditions and field parameters for the Western Aquafarm monitoring wells are presented in Appendix C.

2.1.4 Western Aquafarm Analytical Findings

Contaminants detected during the second quarterly, second annual sampling round at the Western Aquafarm area are listed in Table 2-7. For reference, corresponding results from the first annual sampling program are presented in Table 2-8. One previously installed well, MAMW0514C, was added to the sampling program this quarter to increase vertical aquifer monitoring and to determine baseline aquifer conditions in this area (AFCEE 1998a). Seven monitoring wells previously sampled in the Western Aquafarm area were removed from the program this quarter. Monitoring wells 28MW0018, 28MW0018B, 28MW0019A, and 28MW0574 are located immediately behind the SD-5 extraction well fence and will be included in the SD-5 ETR performance sampling program (AFCEE 1998a). Monitoring wells 28MW0022, 28MW0023, and MAMW0514D had no detections of VOCs or EDB during the first annual sampling period and will continue to be monitored semiannually (AFCEE 1998a). The DSR is presented in Appendix A and a complete listing of analytical results for the second quarterly, second annual sampling round at the Western Aquafarm area is included in Appendix B.

The data reported herein have been compared to the results from the first annual sampling program and to the historical data associated with the site (Table 2-8). In general, the contaminants identified as detections in Table 2-7 of this document were previously reported at the same order of magnitude as that of the historical results (Table 2-8).

Constituent concentrations did not exceed federal MCLs for safe drinking water in groundwater from any wells in the Western Aquafarm area. For the last four sampling rounds, ethylbenzene has been detected in well 39MW0002 at concentrations that exceeded the federal MCL (700 µg/L). These concentrations have demonstrated a consistently small decrease over the past four sampling rounds (Table 2-8). Well 39MW0002 is a water-table well located within the old Fire Training Area-2 (FTA-2) site (ABB-ES 1994). Other fuel-related compounds detected in this well include toluene and total xylenes, which have been consistently detected at concentrations well below MCL.

exceedances since the initiation of this monitoring program. The fuel-related compounds ethylbenzene and total xylenes were also detected below MCLs in five additional wells: 39MW0004, 28MW0020, 28MW0021, MAMW0513A and 28MW0575.

PCE, ethylbenzene, and total xylenes were detected at concentrations below MCLs in groundwater from seven wells in the Western Aquafarm area (Table 2-7). Contaminant concentrations detected during this second quarterly, second annual sampling round were generally within the range of concentrations detected during the previous sampling round (Table 2-8). Increases in contaminant concentrations include ethylbenzene in wells 39MW0004, 28MW0020 and 28MW0575; and total xylenes in wells 39MW0002, 39MW0004, 28MW0020, MAMW0513A and 28MW0575. Slight decreases in contaminant concentration include ethylbenzene in wells 39MW0002 and 28MW0021; and total xylenes in well 28MW0021.

PCE, toluene and chloroform were detected at concentrations below PQLs in groundwater from three wells in the Western Aquafarm area (Table 2-7). Estimated contaminant concentrations not identified during the previous sampling round include toluene in well 39MW0004.

Two monitoring wells, 39MW0005A and 28MW0573, had no detections of VOCs for this second quarterly, second annual monitoring round.

2.2 RELATED INVESTIGATIONS

Performance monitoring of the Storm Drain-5 (SD-5) Extraction, Treatment, and Reinjection (ETR) system supports the monitoring efforts at Western Aquafarm. Several monitoring wells were removed from the Western Aquafarm Groundwater Monitoring Program because they are located immediately behind the SD-5 extraction well fence (AFCEE 1998a). These wells are currently monitored for the SD-5 ETR Performance Monitoring Evaluation (PME) program (AFCEE 1997). A total of 28 SD-5 PME wells were sampled for VOCs and EDB in November and December of 1997. Contaminants

detected during the SD-5 PME sampling are presented in Table 2-9. These results will be discussed in the SD-5 PME Quarterly Monitoring Technical Memorandum due in March of 1998.

2.3 NEXT QUARTERLY SAMPLING EVENT

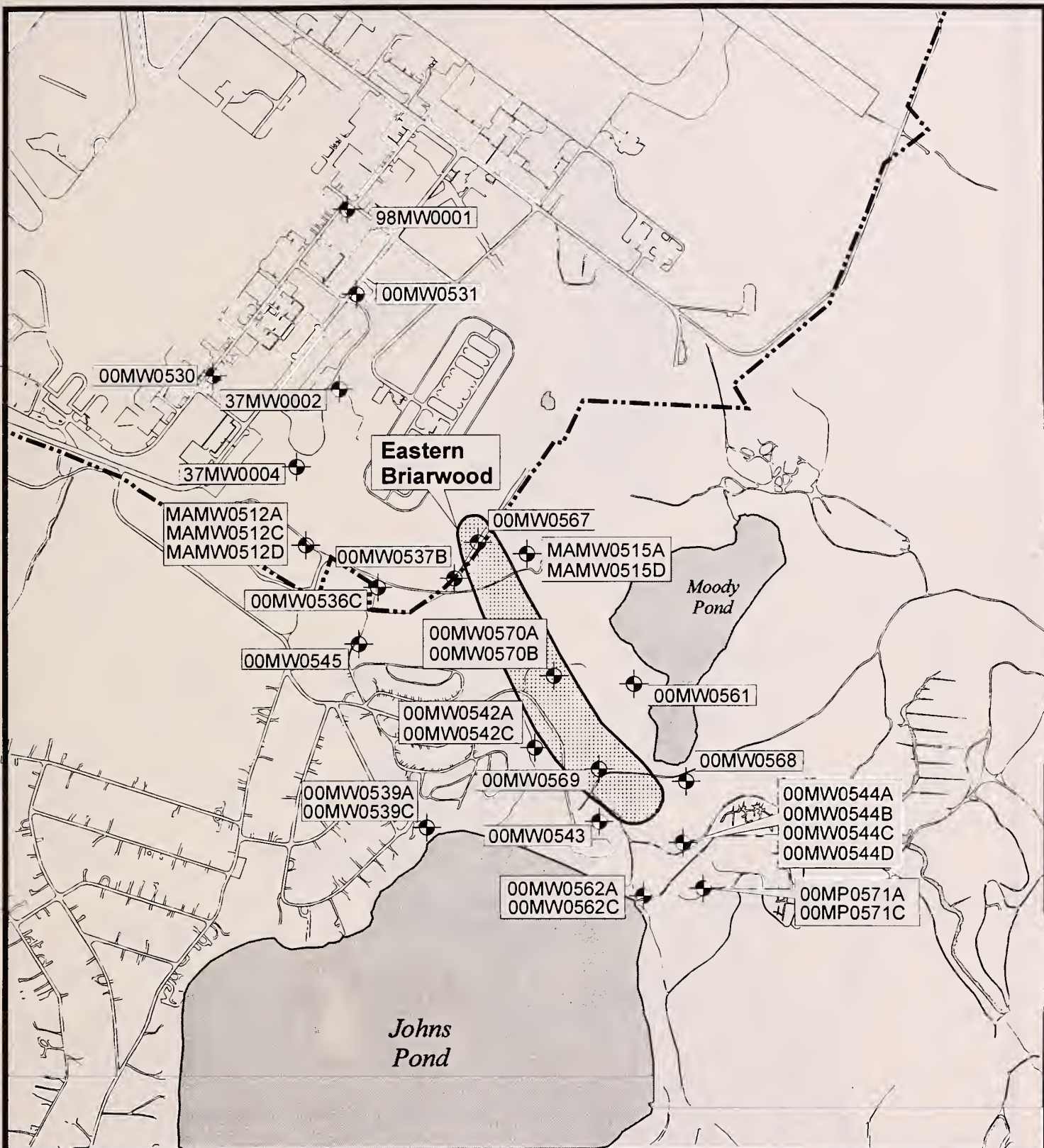
The third quarterly, second annual groundwater sampling event for this groundwater monitoring program is currently scheduled for February 23 through March 25, 1998. Anticipated modifications to the third quarterly, second annual sampling round are presented in the *Final First Annual Comprehensive Report* (AFCEE 1998a).

3.0 REFERENCES



- ABB-ES (ABB Environmental Services, Inc.). 1994 (August). *Draft Southeast Region Groundwater Operable Unit Remedial Investigation (Including Region III)*. Installation Restoration Program, Massachusetts Military Reservation. Prepared for HAZWRAP, Oakridge, TN.
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- . 1998b. *Quality Program Plan*. AFC- J23-35Q85101-M3-0001. Prepared by Jacobs Engineering Group Inc. for AFCEE/MMR, Installation Restoration Program, Otis Air National Guard Base, MA.
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- . 1996a (October). *Final Eastern Briarwood and Western Aquafarm Groundwater Monitoring Plan*. Prepared by Jacobs Engineering Group Inc. for AFCEE/MMR, Installation Restoration Program, Otis Air National Guard Base, MA.
- . 1996b (July 15). *Strategic Plan, Massachusetts Military Reservation Installation Restoration Program*. "Attachment 8: Comprehensive Plume Response Plan and Schedule." Prepared by Jacobs Engineering Group Inc. for AFCEE/MMR, Installation Restoration Program, Otis Air National Guard Base, MA.
- EPA (U.S. Environmental Protection Agency), Region I. 1996 (July 30). *Low Stress (Low Flow) Purging and Sampling Procedures for the Collection of Ground Water Samples from Monitoring Wells*. Revision 2. Boston, Massachusetts.
- OpTech (Operational Technologies Corporation). 1996 (December). *Installation Restoration Program Plume Containment Design Data Gap Field Work Technical Memorandum, Volume 1*. Massachusetts Military Reservation, Cape Cod, Massachusetts. Prepared for HQ ANG/CEVR, Andrews Air Force Base, Maryland.

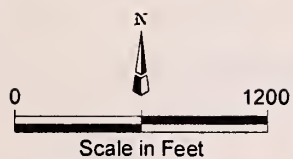
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FIGURES



Legend

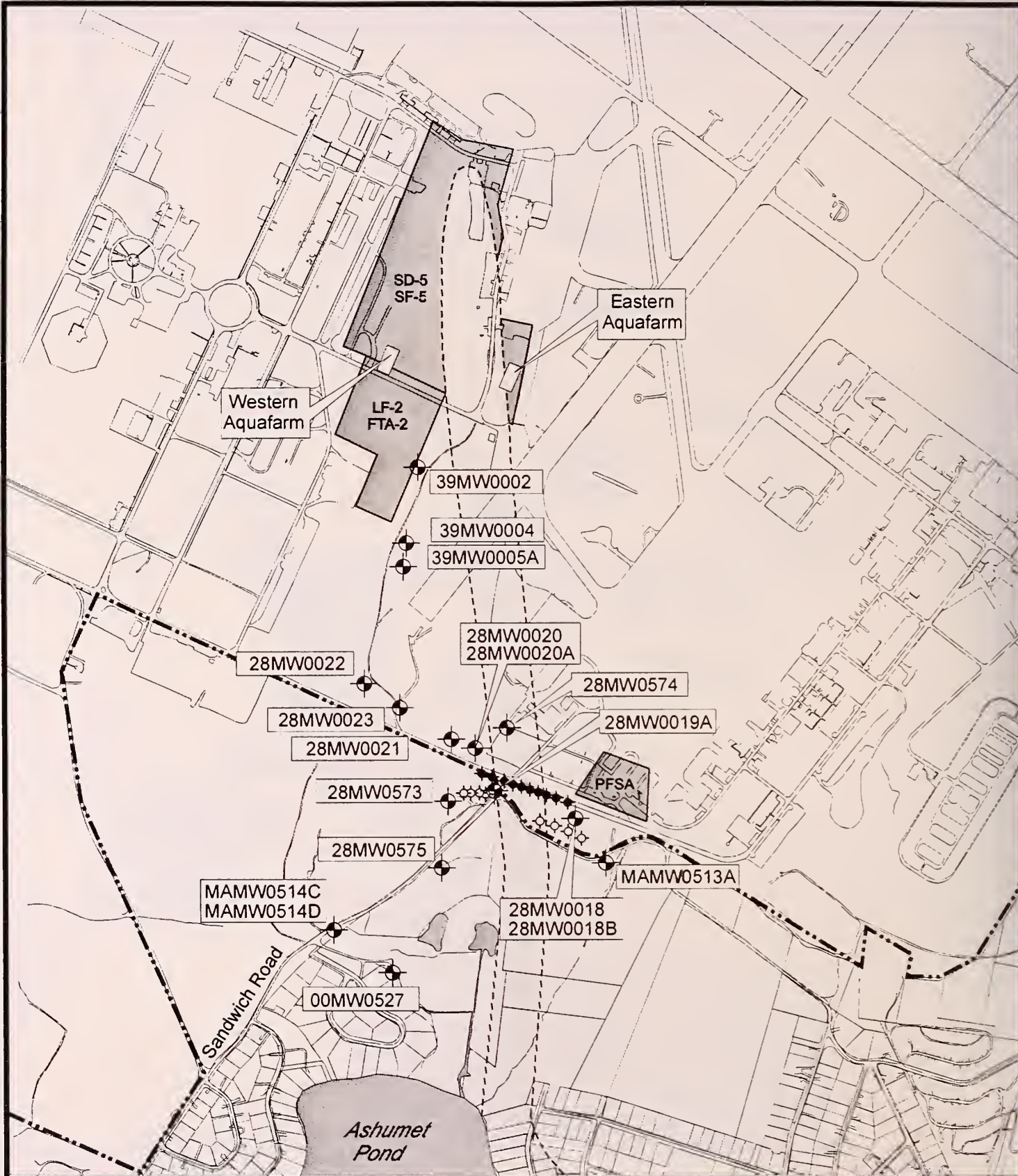
-  Monitoring Well or Multi-Point Well
-  MMR Boundary




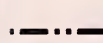


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Well Locations in the Eastern Briarwood Area

Massachusetts Military Reservation
Cape Cod, Massachusetts



Legend

-  Monitoring Well
-  Base Boundary
-  SD-5 North Containment System
-  SD-5 Plume



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Well Locations in the Western Aquafarm Area

Massachusetts Military Reservation
Cape Cod, Massachusetts

1/22/98 mm File aquaplan.cdr

Figure 2-2

TABLES

TABLE 2-1
Field Sampling Measurements Taken During Second Quarterly Sampling
at the Eastern Briarwood Area
Second Annual Monitoring Period

Num	Well Identification	Screen Elevation (ft msl)	TOC Elevation (ft msl)	Screen Length (ft)	Date Sampled	Static Water Level (ft BTOC)	Background PID Reading (ppm)	Well PID Reading (ppm)
1	98MW0001	54.40 - 44.40	106.42	10	09-Dec-97	53.97	0.0	0.0
2	37MW0002	52.58 - 42.58	94.58	10	11-Dec-97	45.37	0.0	0.0
3	MAMW0512A	-24.50 - (-29.50)	97.21	5	12-Dec-97	50.59	0.0	0.0
4	MAMW0512C	15.50 - 10.50	95.82	5	12-Dec-97	49.35	0.0	0.0
5	MAMW0515A	-27.50 - (-32.50)	75.19	5	05-Dec-97	30.70	0.0	18.0
6	00MW0530	52.37 - 42.37	104.99	10	15-Dec-97	55.25	0.0	0.0
7	00MW0531	53.95 - 43.95	99.63	10	12-Dec-97	48.90	0.0	0.0
8	00MW0537B	25.15 - 20.15	102.71	5	12-Dec-97	58.02	0.0	0.0
9	00MW0539A	-34.00 - (-39.00)	70.59	5	15-Dec-97	31.14	0.0	0.0
10	00MW0542C	28.40 - 23.40	43.74	5	01-Dec-97	3.85	0.0	0.1
11	00MW0543	18.80 - 13.80	48.93	5	01-Dec-97	11.00	0.0	0.0
12	00MW0544C	22.50 - 17.50	40.89	5	03-Dec-97	5.21	0.0	0.0
13	00MW0544D	33.00 - 28.00	41.06	5	03-Dec-97	5.32	0.0	0.0
14	00MW0561	(-4.70) - (-9.70)	47.30	5	12-Dec-97	6.95	0.0	0.0
15	00MW0562A	(-89.26) - (-84.26)	45.95	5	12-Dec-97	9.60	0.0	0.0
16	00MW0567	40.70 - 35.70	102.99	5	25-Nov-97	57.67	0.0	0.0
17	00MW0569	28.07 - 23.07	53.07	5	25-Nov-97	14.34	0.0	0.0
18	00MW0570A	(-13.40) - (-18.40)	61.50	5	24-Nov-97	19.77	0.0	0.0
19	00MW0570B	31.37 - 26.37	61.37	5	24-Nov-97	19.62	0.0	31.0
20	00MP0571A	2.00 - (-0.50)	53.00	2.5	05-Dec-97	16.25	0.0	0.0

Notes:

1. PID - photoionization detector, TOC - top of casing, BTOC - below top of casing, msl - mean sea level, ppm - parts per million.
2. All pumps were set in the middle of the screened interval during purging and sampling.

TABLE 2-2
Field Sampling Measurements Taken During Second Quarterly Sampling
at the Western Aquafarm Area
Second Annual Monitoring Period

Num	Well Identification	Screen Elevation (ft msl)	TOC Elevation (ft msl)	Screen Length (ft)	Date Sampled	Static Water Level (ft BTOC)	Background PID Reading (ppm)	Well PID Reading (ppm)
1	39MW0002	41.25 - 51.25	110.49	10	09-Dec-97	45.46	0.0	0.0
2	39MW0004	55.51 - 50.51	98.15	5	09-Dec-97	33.98	0.0	50.0
3	39MW0005A	38.58 - 33.58	100.08	5	09-Dec-97	46.35	0.0	0.0
4	28MW0020	34.00 - 29.00	108.47	5	10-Dec-97	58.15	0.0	0.0
5	28MW0020A	(-23.50) - (-28.50)	107.90	5	10-Dec-97	57.55	0.0	1.9
6	28MW0021	27.10 - 22.10	108.45	5	10-Dec-97	57.90	0.0	0.0
7	MAMW0513A	17.00 - 12.00	89.35	5	05-Dec-97	40.81	0.0	2.1
8	MAMW0514C	5.00 - 0.00	83.15	5	05-Dec-97	35.34	0.0	0.0
9	00MW0527	2.90 - (-2.10)	54.36	5	11-Dec-97	7.62	0.0	0.0
10	28MW0573	16.18 - 11.18	106.18	5	11-Dec-97	56.72	0.0	0.0
11	28MW0575	50.84 - 45.84	105.84	5	11-Dec-97	47.95	0.0	0.0

Notes:

1. PID - photoionization detector, TOC - top of casing, BTOC - below top of casing, msl - mean sea level, ppm - parts per million.
2. All pumps were set in the middle of the screened interval during purging and sampling.

Table 2-3
Field Water Quality Parameters from the Second Quarterly Sampling
in the Eastern Briarwood Area
Second Annual Monitoring Period

Num	Well Identification	Parameter Iteration*	Temperature	pH	Specific Conductance	Turbidity**	Dissolved Oxygen (DO)	Oxidation Reduction Potential (ORP)
			(°C)(+/- %3)	(+/- 0.1 units)	(mS/cm)(+/- %3)	(NTUs)(+/- %10)	(mg/L)(+/- %10)	(mV)
1	98MW0001	3rd to Final	14.10	5.74	0.202	0.0	10.68	202.2
		2nd to Final	13.77	5.72	0.201	0.0	10.85	209.5
		Final	13.72	5.72	0.201	0.1	11.01	214.0
2	37MW0002	3rd to Final	13.08	5.20	0.193	-0.6 ^b	9.05	272.0
		2nd to Final	13.08	5.20	0.193	-0.7 ^b	9.04	276.1
		Final	13.35	5.20	0.194	-0.7 ^b	9.01	280.4
3	MAMW0512A	3rd to Final	12.68	5.35	0.124	0.2	9.30	349.5
		2nd to Final	12.72	5.34	0.125	0.1	9.25	352.8
		Final	12.79	5.33	0.126	0.1	9.27	356.0
4	MAMW0512C	3rd to Final	13.02	5.26	0.062	0.3	11.29	357.5
		2nd to Final	13.11	5.27	0.062	0.2	11.16	359.1
		Final	13.20	5.28	0.062	0.1	11.15	360.8
5	MAMW0515A	3rd to Final	13.09	5.66	0.129	3.3	10.33	398.3
		2nd to Final	13.17	5.66	0.128	2.6	10.10	400.9
		Final	13.20	5.67	0.127	2.3	10.04	403.1
6	00MW0530	3rd to Final	12.88	5.63	0.119	0.1	10.03	145.7
		2nd to Final	13.04	5.63	0.116	0.1	10.00	148.0
		Final	13.05	5.62	0.118	0.2	9.97	150.2
7	00MW0531	3rd to Final	13.58	5.33	0.203	0.6	6.34	325.5
		2nd to Final	13.56	5.34	0.204	0.4	6.60	328.1
		Final	13.63	5.34	0.203	0.4	6.77	330.0
8	00MW0537B	3rd to Final	13.93	5.05	0.222	0.1	10.63	355.9
		2nd to Final	13.96	5.04	0.224	0.1	10.49	361.0
		Final	13.96	5.03	0.224	0.1	10.47	365.1
9	00MW0539A	3rd to Final	11.65	5.90	0.070	0.4	9.25	138.9
		2nd to Final	11.54	5.90	0.069	0.4	9.25	144.0
		Final	11.62	5.91	0.069	0.3	9.26	146.4
10	00MW0542C	3rd to Final	12.50	4.88	0.174	3.7	8.06	368.3
		2nd to Final	12.44	4.88	0.174	-0.1 ^b	8.06	373.9
		Final	12.49	4.93	0.174	0.0	7.79	374.8
11	00MW0543	3rd to Final	11.92	5.44	0.097	0.6	8.80	395.1
		2nd to Final	11.94	5.43	0.096	0.2	8.56	397.4
		Final	11.94	5.42	0.099	0.2	8.38	399.4
12	00MW0544C	3rd to Final	10.81	4.94	0.059	0.2	6.08	372.8
		2nd to Final	10.70	4.93	0.058	0.2	6.03	375.7
		Final	10.84	4.94	0.059	0.2	5.99	377.1
13	00MW0544D	3rd to Final	10.42	4.73	0.076	1.1	3.50	336.3
		2nd to Final	10.46	4.74	0.076	1.2	3.47	335.2
		Final	10.51	4.73	0.076	0.9	3.44	335.8
14	00MW0561	3rd to Final	11.55	5.38	0.144	0.2	8.78	325.6
		2nd to Final	11.56	5.38	0.145	0.2	9.14	327.5
		Final	11.57	5.38	0.145	0.1	9.53	329.0

Table 2-3
Field Water Quality Parameters from the Second Quarterly Sampling
in the Eastern Briarwood Area
Second Annual Monitoring Period

Num	Well Identification	Parameter Iteration*	Temperature	pH	Specific Conductance	Turbidity**	Dissolved Oxygen (DO)	Oxidation Reduction Potential (ORP)
			(°C)(+/- %3)	(+/- 0.1 units)	(mS/cm)(+/- %3)	(NTUs)(+/- %10)	(mg/L)(+/- %10)	(mV)
15	00MW0562A	3rd to Final	12.54	6.11	0.134	2.2	10.63	304.2
		2nd to Final	12.58	6.11	0.134	1.8	10.44	305.0
		Final	12.60	6.11	0.134	1.6	10.32	306.0
16	00MW0567	3rd to Final	13.46	5.17	0.081	0.0	9.31	287.6
		2nd to Final	13.44	5.12	0.082	0.0	9.28	294.1
		Final	13.50	5.14	0.081	0.0	9.24	296.4
17	00MW0569	3rd to Final	11.46	5.05	0.103	0.3	9.17	303.3
		2nd to Final	11.46	5.04	0.105	0.2	9.14	306.8
		Final	11.38	5.04	0.103	0.2	9.10	309.7
18	00MW0570A	3rd to Final	12.17	5.17	0.105	-1.1 ^b	8.93	248.1
		2nd to Final	12.10	5.16	0.105	-1.2 ^b	9.06	253.5
		Final	12.22	5.16	0.105	-1.3 ^b	8.81	257.8
19	00MW0570B	3rd to Final	11.96	4.96	0.159	0.0	3.23	287.7
		2nd to Final	11.98	4.96	0.160	-0.4 ^b	3.16	289.8
		Final	12.05	4.96	0.160	-0.8 ^b	3.11	291.9
20	00MP0571A ^a	Final ^a	11.74	5.63	0.103	761.1 ^c	9.10	205.3

Well Identification:

(Plume ISIS Code)

98 - Chemical Spill-14

37 - Storm Drain-3

00 - Southeast Regional Groundwater
Operable Unit Area

MA - Mashpee well

MP - Solinst multi-point well

C - Celsius

mg/L - milligrams per liter

mS/cm - millisiemens per centimeter

mV - millivolts

NTU - nephelometric turbidity units

Data Modifiers:

* Final three parameter readings taken prior to sampling.

** When turbidity was less than 5 NTUs +/- 0.1, the 10% stability range was not applied (as specified in procedure).

^a - Final parameter reading taken prior to sampling after purging Solinst well.

^b - Negative turbidity value attributed to air bubble on the screen of the turbidity probe or inaccurate zero calibration.

^c - Erroneous turbidity value due to an apparent air bubble on the screen of the turbidity probe.

Analytical Results for the Second Quarterly Sampling
at the Eastern Briarwood Area
Second Annual Monitoring Period

Num	Well Identification	Sampling Quarter	Date Sampled	Trichloroethene		Tetrachloroethene		cis-1,2-Dichloroethene		1,1-Dichloroethene		1,1-Dichloroethane		1,1,1-Trichloroethane		Xylenes		Chloroform		MTBE	
				ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 7 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 200 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L
1	98MW0001	Second First	09-Dec-97 03-Oct-97	ND 0.84J (1.0)	3.3 (1.0) 3.6 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
2	37MW0002	Second First	11-Dec-97 25-Sep-97	ND ND	1.5 (1.0) 1.8 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
3	37MW0004	Second First	NS 25-Sep-97	NS ND	NS 0.7J (1.0)	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
4	*MAMW0512A	Second First	12-Dec-97 NS	0.93J (1.0) NS	ND NS	ND NS	ND NS	2.1 (1.0) NS	ND NS	ND NS	ND NS	ND NS	ND NS	10 (1.0) NS	ND NS	0.56J (1.0) NS	ND NS	ND NS	ND NS	ND NS	ND NS
5	*MAMW0512C	Second First	12-Dec-97 NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS
6	MAMW0512D	Second First	NS 22-Sep-97	NS ND	NS 0.81J (1.0)	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
7	MAMW0512E	Second First	NS 22-Sep-97	NS ND	NS 0.53J (1.0)	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
8	*MAMW0515A	Second First	05-Dec-97 NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS
9	MAMW0515C	Second First	NS 24-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
10	MAMW0515D	Second First	NS 24-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
11	00MW0530	Second First	15-Dec-97 25-Sep-97	0.79J (1.0) 0.85J (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND

Table 2-4

Analytical Results for the Second Quarterly Sampling
at the Eastern Briarwood Area
Second Annual Monitoring Period

	Well Identification	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL = 5 ug/L	Tetrachloroethene ug/L (ppb) MCL = 5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL = 70 ug/L	1,1-Dichloroethene ug/L (ppb) MCL = 7 ug/L	1,1-Dichloroethane ug/L (ppb) MCL = 5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL = 200 ug/L	Xylenes ug/L (ppb) MCL=10,000 ug/L	Chloroform ug/L (ppb) MCL = 100 ug/L	MTBE ug/L (ppb) MCL = 70 ug/L
12	00MW0531	Second First	12-Dec-97 25-Sep-97	ND ND	1.4 (1.0) 0.67J (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
13	00MW0536C	Second First	NS 30-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS 1.8 (1.0)	NS ND
14	00MW0537B	Second First	12-Dec-97 30-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 0.93J (1.0)	ND ND
15	*00MW0539A	Second First	15-Dec-97 NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS
16	00MW0539C	Second First	NS 22-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
17	00MW0542A	Second First	NS 23-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
18	00MW0542C	Second First	01-Dec-97 23-Sep-97	ND ND	0.57J (1.0) 1.4 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
19	00MW0543	Second First	01-Dec-97 22-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
20	00MW0544A	Second First	NS 24-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
21	00MW0544B	Second First	NS 24-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
22	00MW0544C	Second First	03-Dec-97 24-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	1.2 (1.0) 0.91 J (1.0)	ND ND

**Analytical Results for the Second Quarterly Sampling
at the Eastern Briarwood Area
Second Annual Monitoring Period**

Num	Well Identification	Sampling Quarter	Date Sampled	Trichloroethene		Tetrachloroethene	Cis-1,2-Dichloroethene		1,1-Dichloroethene		1,1-Dichloroethane		1,1,1-Trichloroethane		Xylenes		Chloroform		MTBE	
				ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 5 ug/L		ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 7 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 200 ug/L	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL = 100 ug/L	ug/L (ppb) MCL = 70 ug/L							
23	00MW0544D	Second First	03-Dec-97 24-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
24	00MW0545	Second First	NS 30-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
25	00MW0561	Second First	12-Dec-97 30-Sep-97	1.4 (1.0) 2 (1.0)	ND ND	ND ND	ND 1.2 (1.0)	ND 1.2 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
26	00MW0562A	Second First	12-Dec-97 23-Sep-97	ND ND	1.2 (1.0) 1.5 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	0.72 J (1.0) 0.89 J (1.0)	1.4 (1.0) 1.9 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
27	00MW0562C	Second First	NS 23-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS 0.91 J (2.0)
28	00MW0567	Second First	25-Nov-97 19-Sep-97	5.9 (1.0) 5.2 (1.0)	ND ND	ND ND	0.98J (1.0) 1.1 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
29	00MW0568	Second First	NS 26-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
30	00MW0569	Second First	25-Nov-97 19-Sep-97	13 (1.0) 5.8 (1.0)	ND ND	ND ND	7.9 (1.0) 3.2 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
31	00MW0570A	Second First	24-Nov-97 19-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
32	00MW0570B	Second First	24-Nov-97 19-Sep-97	4.7 (1.0) 3.7 (1.0)	ND ND	ND ND	1.3 (1.0) 0.74 J (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
33	00MP0571A	Second First	05-Dec-97 30-Sep-97	ND ND	3.2 (1.0) 1.8 (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	2.2 (1.0) 0.83J (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND

Table 2-4
Analytical Results for the Second Quarterly Sampling
at the Eastern Briarwood Area
Second Annual Monitoring Period

Num	Well Identification	Sampling Quarter	Date Sampled	Trichloroethene		Tetrachloroethene		cis-1,2-Dichloroethene		1,1-Dichloroethene		1,1,1-Trichloroethane		Xylenes		Chloroform		MTBE	
				ug/L (ppb) MCL = 5 ug/L		ug/L (ppb) MCL = 5 ug/L		ug/L (ppb) MCL = 70 ug/L		ug/L (ppb) MCL = 7 ug/L		ug/L (ppb) MCL = 200 ug/L		ug/L (ppb) MCL=10,000 ug/L		ug/L (ppb) MCL = 100 ug/L		ug/L (ppb) MCL = 70 ug/L	
34	00MP0571C	Second First	NS 30-Sep-97	NS ND		NS ND		NS ND		NS ND		NS ND		NS ND		NS ND		NS ND	
35	00MP0571E	Second First	NS 30-Sep-97	NS ND		NS ND		NS ND		NS ND		NS ND		NS ND		NS ND		NS ND	

Analytical Results:

Values indicate contaminant concentration.
 Analytes not shown on table were non-detected in all samples collected.
BOLD - Indicates contaminants were detected in the sample.
SHADED - Indicates levels that exceed the maximum contaminant level (MCL) for drinking water.
 ND Indicates analyte was not detected (see Appendix B for detection limits).
 NS Indicates not sampled.

Analytical Program:

VOCs by Method CLP/DLC-02.1

MTBE - methyl tert butyl ether

Well Identification:

(Plume ISIS Code)
 98 - Chemical Spill-14
 37 - Storm Drain-3
 00 - Southeast Regional Groundwater Operable Unit Area
 MA - Mashpee well
 MP - Solinst monitoring well added to the sampling program this quarter
 * - Indicates monitoring well added to the sampling program this quarter

Data Qualifier Descriptions (listed with PQL):

J - estimated concentration less than practical quantitation limit (PQL)

Table 2-5
Historical Review of Analytical Results
for the Eastern Briarwood Area

				Trichloroethene		Tetrachloroethene		cis-1,2-Dichloroethene		1,2-Dichloroethane		1,1,1-Trichloroethane		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		MTBE	
Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=200 ug/L	ug/L (ppb) MCL=5	ug/L (ppb) MCL=1000	ug/L (ppb) MCL=700	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=100 ug/L	
1	98MW0001	Second	First	03-Oct-97	0.84J	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	11-Jul-97	1.5	6.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	10-Apr-97	1	3.3	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	06-Jan-97	0.78 J	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	25-Oct-96	2	8.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	2	ND	0.2 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2	37MW0002	Second	First	25-Sep-97	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	08-Jul-97	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	07-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	15-Jan-97	ND	4.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92 J	ND	
		First	First	10-Oct-96	ND	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	19-Apr-93	ND	1.0	ND	ND	ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3	37MW0004	-	Historical	4-Apr-90	ND	2.0	ND	ND	ND	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		Second	First	25-Sep-97	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	08-Jul-97	ND	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	08-Apr-97	ND	0.77 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	15-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	10-Oct-96	ND	0.70 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4	MAMW0512A	-	Historical	19-Apr-93	ND	0.3 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	4-Apr-90	ND	3.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	1	ND	0.8	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5	MAMW0512C	-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6	MAMW0512D	Second	First	22-Sep-97	ND	0.81J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	03-Jul-97	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	07-Apr-97	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	24-Jan-97	1.1	0.81 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	15-Oct-96	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2-5
Historical Review of Analytical Results
for the Eastern Briarwood Area

Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene		Tetrachloroethene		cis-1,2-Dichloroethene		1,2-Dichloroethane		1,1,1-Trichloroethane		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		MTBE		
					ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=200 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=1000	ug/L (ppb) MCL=700	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=70 ug/L								
7	MAMW0512E	Second	First	22-Sep-97	ND	0.53J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	03-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.64J	ND	ND	ND	
		First	Third	07-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	24-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7 J	ND	ND	ND	
		First	First	16-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5 J	ND	ND	ND	
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8	MAMW0515A	-	Historical	24-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	26-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
9	MAMW0515C	Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	08-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	08-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	20-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	31-Oct-96	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	24-Jul-95	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.8	ND	ND	ND	ND
		-	Historical	4-Jun-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10	MAMW0515D	Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	08-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	08-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	20-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	31-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	26-May-93	ND	0.2J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11	00MW0530	Second	First	25-Sep-97	0.85J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	08-Jul-97	2	ND	ND	0.76J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	07-Apr-97	1.7	0.42 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	13-Jan-97	2.4	0.59 J	0.64 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	11-Oct-96	2	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	21-Apr-93	4	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2-5
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Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL=5 ug/L	Tetrachloroethene ug/L (ppb) MCL=5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL=70 ug/L	1,2-Dichloroethane ug/L (ppb) MCL=5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL=200 ug/L	Benzene ug/L MCL=5	Toluene ug/L (ppb) MCL=1000	Ethylbenzene ug/L (ppb) MCL=700	Xylenes (Total) ug/L (ppb) MCL=10,000 ug/L	Chloroform ug/L (ppb) MCL=100 ug/L	MTBE ug/L (ppb) MCL=70 ug/L
12	00MW0531	Second	First	25-Sep-97	ND	0.67J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	09-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	04-Apr-97	ND	0.56 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	14-Jan-97	ND	0.86 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	10-Oct-96	ND	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	17-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	27-Apr-93	0.4J	0.5J	ND	ND	ND	ND	ND	ND	ND	ND	ND
13	00MW0536C	Second	First	30-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND
		First	Fourth	10-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND
		First	Third	03-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND
		First	Second	14-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.84 J	ND
		First	First	16-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND
		-	Historical	25-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND
		-	Historical	30-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93J	ND
14	00MW0537B	Second	First	30-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	10-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	03-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	16-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	28-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	17-Aug-95	ND	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	7-Jul-95	ND	0.75	ND	ND	ND	ND	ND	ND	ND	ND	ND
15	00MW0539A	-	Historical	25-May-93	0.9J	ND	ND	0.6	ND	ND	ND	ND	ND	0.3J	ND
		-	Historical	3-Jun-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL=5 ug/L	Tetrachloroethene ug/L (ppb) MCL=5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL=70 ug/L	1,2-Dichloroethane ug/L (ppb) MCL=5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL=200 ug/L	Benzene ug/L MCL=5	Toluene ug/L (ppb) MCL=1000	Ethylbenzene ug/L (ppb) MCL=700	Xylenes (Total) ug/L (ppb) MCL=10,000 ug/L	Chloroform ug/L (ppb) MCL=100 ug/L	MTBE ug/L (ppb) MCL=70 ug/L
16	00MW0539C	Second	First	22-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	08-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	04-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	21-Jan-97	ND	0.52 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	24-Oct-96	ND	0.60 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	29-Dec-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	26-Jun-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	3-Jun-93	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
17	00MW0542A	Second	First	23-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	08-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	04-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	17-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	14-Oct-96	0.6 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	4-Aug-95	0.8	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	9-Jun-93	0.5J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	9-Jun-93	2	6	ND	ND	3	ND	ND	ND	ND	ND	ND
18	00MW0542C	Second	First	23-Sep-97	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	08-Jul-97	ND	0.84J	ND	ND	ND	ND	ND	ND	ND	ND	1.4J (2.0)
		First	Third	04-Apr-97	ND	0.66 J	ND	ND	ND	ND	ND	ND	ND	ND	0.85J
		First	Second	17-Jan-97	ND	0.61 J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	14-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	16-Aug-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	9-Jun-93	2	6	ND	ND	3	ND	ND	ND	ND	ND	ND
		-	Historical	9-Jun-93	2	6	ND	ND	3	ND	ND	ND	ND	ND	ND

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Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL=5 ug/L	Tetrachloroethene ug/L (ppb) MCL=5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL=70 ug/L	1,2-Dichloroethane ug/L (ppb) MCL=5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL=200 ug/L	Benzene ug/L MCL=5	Toluene ug/L (ppb) MCL=1000	Ethylbenzene ug/L (ppb) MCL=700	Xylenes (Total) ug/L (ppb) MCL=10,000 ug/L	Chloroform ug/L (ppb) MCL=100 ug/L	MTBE ug/L (ppb) MCL=70 ug/L
19	00MW0543	Second	First	22-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	09-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	03-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	24-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	29-Oct-96	0.5 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	20-Dec-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	29-Jun-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	21-Dec-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	3-Jun-93	0.9J	0.6J	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	3-Jun-93	0.9J	0.6J	ND	ND	ND	ND	ND	ND	ND	ND	ND
20	00MW0544A	Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	27-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	04-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	07-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	26-Sep-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	3-Jun-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
21	00MW0544B	Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	27-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	04-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	07-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	26-Sep-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	3-Jun-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
22	00MW0544C	Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.91J	ND
		First	Fourth	27-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.85J	ND
		First	Third	04-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND
		First	Second	07-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	7-Oct-96	0.7 J	ND	ND	ND	ND	ND	ND	ND	ND	0.8 J	ND
		-	Historical	30-Dec-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	8-Jul-95	6.06	0.77	3.67	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	29-Dec-94	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	10-Jun-93	3	ND	2	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	10-Jun-93	3	ND	2	ND	ND	ND	ND	ND	ND	ND	ND

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Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene ug/L (ppb) MCL=5 ug/L	Tetrachloroethene ug/L (ppb) MCL=5 ug/L	cis-1,2-Dichloroethene ug/L (ppb) MCL=70 ug/L	1,2-Dichloroethane ug/L (ppb) MCL=5 ug/L	1,1,1-Trichloroethane ug/L (ppb) MCL=200 ug/L	Benzene ug/L MCL=5	Toluene ug/L (ppb) MCL=1000	Ethylbenzene ug/L (ppb) MCL=700	Xylenes (Total) ug/L (ppb) MCL=70,000 ug/L	Chloroform ug/L (ppb) MCL=100 ug/L	MTBE ug/L (ppb) MCL=70 ug/L
31	00MW0570A	Second	First	19-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	23-Jun-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	03-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	08-Jan-97	10	0.45 J	2.4	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	09-Oct-96	15	ND	7	ND	ND	ND	ND	ND	ND	0.6 J	ND
		-	Historical	14-Nov-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	17-Aug-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
32	00MW0570B	Second	First	19-Sep-97	3.7	ND	0.74 J	ND	ND	ND	ND	ND	ND	0.80 J	ND
		First	Fourth	23-Jun-97	3.7	ND	0.78 J	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	03-Apr-97	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	08-Jan-97	ND	1.4	ND	ND	ND	ND	ND	ND	ND	1.7	ND
		First	First	09-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	15-Nov-95	5.9	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND
		-	Historical	17-Aug-95	5.9	ND	1.4	ND	ND	1.4	ND	ND	ND	ND	ND
33	00MP0571A	Second	First	30-Sep-97	ND	1.8	ND	ND	0.83 J	ND	ND	ND	ND	ND	ND
		First	Fourth	03-Jul-97	ND	2	ND	ND	1.7	ND	ND	ND	ND	ND	ND
		First	Third	07-Apr-97	ND	2.2	ND	ND	1.5	ND	ND	ND	ND	ND	ND
		First	Second	23-Jan-97	ND	4	ND	ND	1.8	ND	ND	ND	ND	ND	ND
		First	First	31-Oct-96	ND	3	ND	ND	1	ND	ND	ND	ND	ND	ND
		-	Historical	09-Aug-96	0.64	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	00MP0571C	Second	First	30-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Fourth	03-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Third	07-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	Second	23-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		First	First	31-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		-	Historical	09-Aug-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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Num	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Trichloroethene		Tetrachloroethene		cis-1,2-Dichloroethene		1,2-Dichloroethane		1,1,1-Trichloroethane		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		MTBE	
					ug/L (ppb)	MCL=5 ug/L	ug/L (ppb)	MCL=5 ug/L	ug/L (ppb)	MCL=70 ug/L	ug/L (ppb)	MCL=5 ug/L	ug/L (ppb)	MCL=200 ug/L	ug/L	MCL=5	ug/L (ppb)	MCL=1000	ug/L (ppb)	MCL=700	ug/L (ppb)	MCL=10,000 ug/L	ug/L (ppb)	MCL=100 ug/L	ug/L (ppb)	MCL=70 ug/L
35	00MP0571E	Second	First	30-Sep-97	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
		First	Fourth	03-Jul-97	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
		First	Third	07-Apr-97	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
		First	Second	23-Jan-97	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	
		First	First	31-Oct-96	ND		ND		ND		ND		ND		ND		ND		ND		ND		0.9 J		ND	
		-	Historical	09-Aug-96	ND		ND		ND		ND		ND		ND		ND		ND		ND		ND		ND	

Analytical Results:

Values indicate contaminant concentration.

Analytes not shown on table were non-detected in all samples collected.

BOLD - Indicates contaminants were detected in the sample.

SHADED - Indicates levels that exceed the maximum contaminant level (MCL) for drinking water.

ND - Indicates analyte was not detected.

Analytical Program:

VOCs by Method CLP/OLC-02.1

EDB by Method 504

MTBE - tert-butyl methyl ether

Well Identification:

(Prime ISIS Code)

98 - Chemical Spill-14

37 - Storm Drain-3

00 - Southeast Regional Groundwater

Operable Unit Area

MA - Mashpee well

Data Qualifier Descriptions (listed with PQL):

J - estimated concentration

less than PQL

TABLE 2-6
Field Water Quality Parameters from the Second Quarterly Sampling
in the Western Aquafarm Area
Second Annual Monitoring Period

Num.	Well Identification	Parameter Iteration*	Temperature	pH	Specific Conductance	Turbidity**	Dissolved Oxygen (DO)	Oxidation Reduction Potential (ORP)
			(°C)(+/- %3)	(+/- 0.5 units)	(mS/cm)(+/- %3)	(NTUs)(+/- %10)	(mg/L)(+/- %10)	(mV)
1	39MW0002	3rd to Final	12.79	6.50	0.197	0.9	-0.10 ^c	-82.0
		2nd to Final	12.73	6.51	0.196	0.8	-0.12 ^c	-84.0
		Final	12.69	6.52	0.194	0.7	-0.33 ^c	-86.2
2	39MW0004	3rd to Final	13.26	5.90	0.221	0.0	4.02	227.2
		2nd to Final	13.30	5.89	0.221	-0.1 ^b	3.85	230.3
		Final	13.34	5.89	0.221	-0.1 ^b	3.95	232.1
3	39MW0005A	3rd to Final	13.21	6.78	0.177	0.1	5.87	-85.4
		2nd to Final	13.26	6.79	0.177	0.1	6.29	-89.3
		Final	13.18	6.80	0.177	0.1	6.17	-92.1
4	28MW0020	3rd to Final	12.92	6.70	0.140	-0.1 ^b	-2.66 ^c	-79.0
		2nd to Final	13.06	6.74	0.140	1.0	-3.15 ^c	-88.2
		Final	13.04	6.75	0.140	-0.1 ^b	-3.58 ^c	-93.7
5	28MW0020A	3rd to Final	12.48	5.56	0.105	0.0	10.43	229.0
		2nd to Final	12.61	5.56	0.104	0.2	10.03	240.4
		Final	12.69	5.56	0.095	0.0	10.13	246.3
6	28MW0021	3rd to Final	13.02	6.69	0.333	0.5	11.03	-129.2
		2nd to Final	13.09	6.70	0.333	0.4	11.18	-131.0
		Final	13.19	6.72	0.333	0.6	11.03	-132.9
7	MAMW0513A	3rd to Final	13.45	5.33	0.052	0.1	9.23	148.1
		2nd to Final	13.47	5.32	0.052	0.1	9.25	147.3
		Final	13.51	5.31	0.052	0.1	9.28	150.2
8	MAMW0514C	3rd to Final	12.36	5.80	0.094	-0.1 ^b	11.46	380.9
		2nd to Final	12.44	5.80	0.095	0.2	11.45	385.8
		Final	12.44	5.17	0.094	-0.1 ^b	11.43	389.8
9	00MW0527	3rd to Final	11.06	5.33	0.111	-0.7 ^b	10.31	270.4
		2nd to Final	11.06	5.33	0.112	-0.8 ^b	10.33	272.8
		Final	11.06	5.33	0.112	-0.8 ^b	10.31	274.5
10	28MW0573	3rd to Final	11.46	5.80	0.106	0.7	0.46	57.8
		2nd to Final	11.90	5.80	0.106	0.5	0.59	56.8
		Final	11.85	5.80	0.107	0.5	0.63	56.1
11	28MW0575	3rd to Final	12.15	6.16	0.203	0.9	0.11	-11.7
		2nd to Final	12.18	6.16	0.202	0.6	0.10	-13.3
		Final	12.18	6.16	0.202	0.6	0.08	-14.6

Well Identification:
(Plume ISIS Code)
28 - Storm Drain-5
39 - Fire Training Area-2
MA - Mashpee Well
00 - Southeast Regional Groundwater Operable Unit Area

C - Celsius
mg/L - milligrams per liter
mS/cm - millisiemens per centimeter
mV - millivolts
NTU - nephelometric turbidity units

Data Modifiers:

* Final three parameter readings taken prior to sampling.

** When turbidity was less than 5 NTUs, the 10% range was not applied.

^b - Negative turbidity value attributed to air bubble on the screen of the turbidity probe or inaccurate zero calibration.

^c - Negative dissolved oxygen value may be indicative of a reducing environment or can be attributed to inaccurate zero calibration.

Analytical Results for the Second Quarterly Sampling
at the Western Aquafarm Area
Second Annual Monitoring Period

				Trichloroethene		Tetrachloroethene		Acetone		Cis 1,2-Dichloroethene		Toluene		Ethylbenzene		Xylenes		Chloroform	
Num	Well Identification	Sampling Quarter	Date Sampled	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = none	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 1,000 ug/L	ug/L (ppb) MCL = 700 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L								
1	39MW0002	Second First	09-Dec-97 02-Oct-97	ND ND	ND ND	ND ND	ND ND	ND 34J (50.0)	690 (50.0) 740 (50.0)	3,800 (50.0) 3,500 (50.0)	ND ND								
2	39MW0004	Second First	09-Dec-97 02-Oct-97	ND ND	ND ND	ND ND	ND ND	1.9J (2.0) ND	27 (2.0) ND	76 (2.0) ND	ND ND								
3	39MW0005A	Second First	09-Dec-97 02-Oct-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND								
4	28MW0018	Second First	NS 24-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND								
5	28MW0018B	Second First	NS 24-Sep-97	NS ND	NS 1.5 (1.0)	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND								
6	28MW0019A	Second First	NS 25-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND								
7	28MW0020	Second First	10-Dec-97 01-Oct-97	ND ND	ND ND	ND ND	ND ND	ND ND	40 (5.0) 8.8 (5.0)	160 (5.0) 99 (5.0)	ND ND								
8	28MW0020A	Second First	10-Dec-97 01-Oct-97	ND ND	ND ND	ND 18J (5.0)	ND ND	ND ND	ND ND	ND ND	0.6J (1.0) 0.74J (1.0)								
9	28MW0021	Second First	10-Dec-97 01-Oct-97	ND ND	ND ND	ND ND	ND ND	ND 11 (10.0)	19 (5.0) 69 (10.0)	140 (5.0) 520 (10.0)	ND ND								
10	28MW0022	Second First	NS 02-Oct-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND								
11	28MW0023	Second First	NS 03-Oct-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND								

Table 2-7
Analytical Results for the Second Quarterly Sampling
at the Western Aquafarm Area
Second Annual Monitoring Period

				Trichloroethene	Tetrachloroethene	Acetone	cis 1,2-Dichloroethene	Toluene	Ethylbenzene	Xylenes	Chloroform
Num	Well Identification	Sampling Quarter	Date Sampled	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = 5 ug/L	ug/L (ppb) MCL = none	ug/L (ppb) MCL = 70 ug/L	ug/L (ppb) MCL = 1,000 ug/L	ug/L (ppb) MCL = 700 ug/L	ug/L (ppb) MCL = 10,000 ug/L	ug/L (ppb) MCL = 100 ug/L
12	MAMW0513A	Second First	05-Dec-97 25-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	1.2 (1.0) ND	ND ND
13	*MAMW0514C	Second First	05-Dec-97 NS	ND NS	1.2 (1.0) NS	ND NS	ND NS	ND NS	ND NS	ND NS	ND NS
14	MAMW0514D	Second First	NS 25-Sep-97	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND	NS ND
15	00MW0527	Second First	11-Dec-97 26-Sep-97	ND ND	0.43J (1.0) 0.75J (1.0)	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND
16	28MW0573	Second First	11-Dec-97 25-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	ND 1.2 (1.0)	ND 0.65J (1.0)	ND ND
17	28MW0574	Second First	NS 01-Oct-97	NS 41 (5.0)	NS ND	NS ND	NS 70 (5.0)	NS ND	NS ND	NS ND	NS ND
18	28MW0575	Second First	11-Dec-97 25-Sep-97	ND ND	ND ND	ND ND	ND ND	ND ND	2.6 (1.0) ND	1.0 (1.0) ND	ND ND

Analytical Results:

Values indicate contaminant concentration.

Analytes not shown on table were non-detect in all samples collected.

BOLD - indicates contaminants were detected in the sample.

SHADED - indicates levels that exceed the maximum contaminant level (MCL) for drinking water.

ND indicates analyte was not detected (see Appendix B for detection limits).

NS indicates not sampled.

Analytical Program:

VOCs by Method CLP/OLC-02.1

Well Identification:

(Plume ISIS Code)

28 - Storm Drain-5

39 - Fire Training Area-2

MA - Mashpee well

00 - Southeast Regional Groundwater Operable Unit Area

* - Indicates monitoring well added to the sampling program this quarter

Data Qualifier Descriptions (listed with PQL):

J - estimated concentration

less than practical quantitation limit (PQL)

	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Ethylene Dibromide		Trichloroethene		Tetrachloroethene		Acetone		Cis 1,2-Dichloroethene		1,2,4-Trichlorobenzene		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		Chloroethane		Naphthalene		Chloromethane			
					ug/L (ppb) MCL=0.02 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=78 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=700 ug/L	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none														
1	39MW0002	Second	First	02-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34J	740	3500	ND	ND	ND	ND	ND	ND	ND	ND	ND				
First		Fourth	10-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	970	5800	ND	ND	ND	ND	ND	ND	ND	ND	ND				
First		Third	09-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	1100	6100	ND	ND	ND	ND	ND	ND	ND	ND	ND				
First		Second	02-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	130.0 J	1300	6100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		First	01-Oct-96	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	440	1400	ND	ND	ND	ND	1	ND	ND	1	ND			
-		Historical	09-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.9	26	200	1130	ND	ND	ND	ND	ND	ND	ND	ND	ND			
-		Historical	19-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	950	5600	ND	ND	ND	ND	ND	150J	ND	ND	ND			
-	Historical	10-Apr-90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	900J	ND	ND	ND	72	ND	ND	ND				
2	39MW0004	Second	First	02-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		Fourth	10-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		Thirld	09-Apr-97	ND	0.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	8.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First		Second	02-Jan-97	ND	ND	0.63 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First		First	01-Oct-96	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
-		Historical	19-May-93	ND	1	0.4J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	65	ND	ND	ND	ND	1J	ND	ND	ND	ND		
3		39MW0005A	Second	First	02-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First	Fourth		10-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First	Third		09-Apr-97	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First	Second		02-Jan-97	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First	First		01-Oct-96	ND	1	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
-	Historical		06-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	4.32	0.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
4	28MW00018		Second	First	24-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
First		Fourth	11-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First		Third	15-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
First		Second	26-Dec-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
First		First	21-Nov-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
-		Historical	26-May-93	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
-		Historical	13-Apr-90	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2-8

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	Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Ethylene Dibromide		Trichloroethene		Tetrachloroethene		Acetone		Cis 1,2-Dichloroethene		1,2,4-Trichlorobenzene		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		Chloroethane		Naphthalene		Chloromethane			
					ug/L (ppb) MCL=0.02 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=5ug/L	ug/L (ppb) MCL=1,000 ug/L	ug/L (ppb) MCL=700 ug/L	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none														
9	28MW0021	Second	First	01-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	69	520	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		11-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19J	470	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		10-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			
First		06-Jan-97	ND	ND	ND	ND	ND	18.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	9	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First		30-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	22	400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
-		Historical	0.13R	ND	06-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.88J	70J	221J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
-		Historical	ND	ND	30-Dec-94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	2.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
-		Historical	ND	ND	23-Apr-91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3J	ND	3J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	12-Apr-90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3J	3J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
10	28MW0022	Second	First	02-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First		11-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
First		10-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First		03-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First		02-Oct-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
-		Historical	0.11R	ND	06-Jul-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
-		Historical	ND	ND	27-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
			-	Historical	23-Apr-90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2J	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
11	28MW0023	Second	First	03-Oct-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First		11-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
First		10-Apr-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
First		03-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
First		24-Sep-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
-		Historical	0.12R	ND	06-Jul-95	ND	ND	ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
-		Historical	ND	ND	27-May-93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
			-	Historical	23-Apr-90	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1J	ND	1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Table 2-8

[illegible]

Historical Review of Analytical Results
for the Western Aquafarm Area

Well Identification	Sampling Period	Sampling Quarter	Date Sampled	Ethylene Dibromide		Trichloroethene		Tetrachloroethene		Acetone		cis 1,2-Dichloroethene		1,2,4-Trichlorobenzene		Benzene		Toluene		Ethylbenzene		Xylenes (Total)		Chloroform		Chloroethane		Naphthalene		Chloromethane	
				ug/L (ppb) MCL=0.02 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=70 ug/L	ug/L (ppb) MCL=5ug/L	ug/L (ppb) MCL=1,000 ug/L	ug/L (ppb) MCL=700 ug/L	ug/L (ppb) MCL=10,000 ug/L	ug/L (ppb) MCL=100 ug/L	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none	ug/L (ppb) MCL=none													
17	28MW0575	Second	First	25-Sep-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Fourth	09-Jul-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Third	08-Apr-97	ND	ND	ND	0.47 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	Second	22-Jan-97	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		First	First	25-Sep-96	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		-	Historical	28-Nov-95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Analytical Results:

Values indicate contaminant concentration.

Analytes not shown on table were non-detect in all samples collected.

BOLD - Indicates contaminants were detected in the sample.

SHADED - Indicates levels that exceed the maximum contaminant level (MCL) for drinking water.

ND - Indicates analyte was not detected.

Analytical Program:

VOCs by Method CLP/OLC-02.1

EDB by Method 504

Well Identification:

(Plume ISIS Code)

28 - Storm Drain-5

39 - Fire Training Area-2

MA - Mashpee well

00 - Southeast Regional Groundwater Operable Unit Area

Data Qualifier Descriptions (listed with PQL):

J - estimated concentration

less than PQL

R - value was rejected

Table 2-9
Analytical Results for SD-5 Performance Monitoring Evaluation

Well Identification	Date Sampled	Trichloroethene	Tetrachloroethene	cis-1,2-Dichloroethene	Toluene	Ethylbenzene	Total Xylenes	Ethylene Dibromide
		ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL= 5 ug/L	ug/L (ppb) MCL= 70 ug/L	ug/L (ppb) MCL= 1,000 ug/L	ug/L (ppb) MCL= 700 ug/L	ug/L (ppb) MCL= 10,000 ug/L	ug/L (ppb) MCL=0.02 ug/L
28MW0580	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0577B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0598B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0598A	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0597C	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0597B	Dec-97	ND	1.1	ND	ND	ND	ND	ND
	Nov-97	ND	1.1	ND	ND	ND	ND	ND
28MW0597A	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0574	Dec-97	15.0	ND	21.0	ND	ND	ND	ND
	Nov-97	21.0	ND	32.0	ND	ND	ND	ND
28MW0596	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	1.00	ND	0.88	ND	ND	ND	ND
28MW0592C	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0592B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	0.6	ND	ND	ND	ND	ND
28MW0592A	Dec-97	ND	3.4	ND	ND	ND	ND	ND
	Nov-97	ND	1.3	ND	ND	ND	ND	ND
28MW0018A	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0018B	Dec-97	ND	1.2	ND	ND	ND	ND	ND
	Nov-97	ND	1.2	ND	ND	ND	ND	ND
28MW0593C	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0593B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0593A	Dec-97	ND	0.72	ND	ND	ND	ND	ND
	Nov-97	ND	0.7	ND	ND	ND	ND	ND
28MW591F	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW591E	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0313A	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND

Table 2-9
Analytical Results for SD-5 Performance Monitoring Evaluation

Well Identification	Date Sampled	Trichloroethene	Tetrachloroethene	cis-1,2-Dichloroethene	Toluene	Ethylbenzene	Total Xylenes	Ethylene Dibromide
		ug/L (ppb) MCL=5 ug/L	ug/L (ppb) MCL= 5 ug/L	ug/L (ppb) MCL= 70 ug/L	ug/L (ppb) MCL= 1,000 ug/L	ug/L (ppb) MCL= 700 ug/L	ug/L (ppb) MCL= 10,000 ug/L	ug/L (ppb) MCL=0.02 ug/L
28MW0313B	Dec-97	ND	ND	ND	ND	13	62	ND
	Nov-97	ND	ND	ND	ND	6	27	ND
28MW0313Z	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0595C	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0595B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0595A	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0594C	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0594B	Dec-97	ND	ND	ND	ND	ND	ND	ND
	Nov-97	ND	ND	ND	ND	ND	ND	ND
28MW0594A	Dec-97	ND	0.41	ND	ND	ND	ND	ND
	Nov-97	ND	0.46	ND	ND	ND	ND	ND

Notes:

1. Analytes not shown on table were non-detect in all samples collected.
2. VOCs were analysed via Method CLP/OLC-02.1; EDB was analysed via Method 504.
3. BOLD - Indicates contaminants were detected in the sample.
4. SHADED - Indicates concentration level exceeded the Maximum Contaminant Level (MCL) for drinking water.
5. ND = not detected.

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APPENDIX A

Data Summary Report for the Second Quarterly Sampling Round Second Annual Monitoring Period at the Eastern Briarwood and Western Aquafarm Areas

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ACRONYMS AND ABBREVIATIONS

AFCEE	U.S. Air Force Center for Environmental Excellence
Aq	aqueous
CLP	Contract Laboratory Program
COC	contaminant of concern
DQO	data quality objective
EB	equipment blank
EDB	ethylene dibromide, also 1,2-dibromoethane
EPA	U.S. Environmental Protection Agency
HAZWRAP	Hazardous Waste Remedial Action Program
ID	identification number
ISIS	Integrated Site Information System
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LOC ID	location identification
MMR	Massachusetts Military Reservation
MS	matrix spike
MSD	matrix spike duplicate
PARCC	precision, accuracy, representativeness, comparability, and completeness
PCE	tetrachloroethylene
QC	quality control
QPP	Quality Program Plan
RF	response factor
RPD	relative percent difference
TB	trip blank
TCE	trichloroethylene
VOC	volatile organic compound
µg/L	micrograms per liter

1.0 SAMPLE COLLECTION

Jacobs Engineering Group Inc. collected 31 groundwater samples and evaluated analytical results to obtain sufficient data to meet the objectives of the Eastern Briarwood and Western Aquafarm Groundwater Monitoring Program. Samples evaluated for the second quarterly sampling round of the second annual monitoring period were collected between November 24, 1997 and December 15, 1997. Also collected and submitted for analysis were three field duplicate samples, five equipment blanks (EBs), 10 trip blanks (TBs) and one matrix spike/matrix spike duplicate (MS/MSD) sample pair. Samples were shipped for analysis to Quanterra Environmental Services in Tampa, Florida. All samples were analyzed VOCs by Contract Laboratory Program (CLP) method OLC02.1. Quanterra is certified by Massachusetts to perform VOC analyses. All data were reviewed and validated in accordance with MMR project-specific data review guidelines, which are based on the documents listed below.

- *Air Force Center for Environmental Excellence (AFCEE)*. 1998. *Quality Program Plan*. AFC-J23-35Q85101-M3-0001. Prepared by Jacobs Engineering for AFCEE/MMR, Installation Restoration Program, Otis Air National Guard Base, MA.
- *U.S. Environmental Protection Agency (EPA)*. February 1994. *Contract Laboratory Program National Functional Guidelines for Organic Data Review*. Publication 9230.1-05. EPA/540/R-94/012. PB94-963501. Office of Solid Waste and Emergency Response, Washington, D. C. February 1994.
- —. 1988. *Region I Laboratory Data Validation Functional Guidelines for Evaluating Organic Data Analyses*. Compiled by Ruth Bleyler, Sample Management Office, Viar & Company. Prepared by the USEPA Data Review Workgroup; modified by Deborah Szaro, EPA Region 1. February 1, 1988; modified November 1, 1988.
- —. 1996. *Region I EPA-New England Data Validation Functional Guidelines for Evaluating Environmental Analyses*. Compiled by EPA - New England Region I Quality Assurance Unit Staff, Office of Environmental Measurement and Evaluation. July 1996; revised December, 1996.

Samples were validated at either Level D (i.e., EPA Level IV) after a review of summary forms and raw data, or Level C (i.e., EPA Level III) after a review of the summary form information only. The project-specific data review guidelines for the plume response program at the Massachusetts Military Reservation (MMR) are a modification of EPA Region I guidelines and AFCEE data validation criteria.

2.0 SAMPLE IDENTIFICATION

Table A-1 lists the field samples that were collected and analyzed as part of this sampling event. Each unique Jacobs chain-of-custody control number is cross-referenced with its location identification (LOC ID), and unique sample ID.

TABLE A-1
Sample Identification Cross- Reference and Analyses

Sample ID	Control Number	Location ID
00MP0571A-06	OT-G025403	00MP0571A
00MW0527-06	OT-G026403	00MW0527
00MW0530-06	OT-G027101	00MW0530
00MW0531-06	OT-G026503	00MW0531
00MW0537B-06	OT-G026903	00MW0537B
00MW0539A-02	OT-G027102	00MW0539A
00MW0542C-06	OT-G024902	00MW0542C
00MW0543-05	OT-G024901	00MW0543
00MW0544C-06	OT-G025101	00MW0544C
00MW0544D-06	OT-G025102	00MW0544D
00MW0561-06	OT-G026502	00MW0561
00MW0562A-06	OT-G026501	00MW0562A
00MW0567-06	OT-G024502	00MW0567
00MW0569-06	OT-G024501	00MW0569
00MW0570A-06	OT-G024301	00MW0570A
00MW0570B-06	OT-G024302	00MW0570B
28MW0020-06	OT-G026202	28MW0020
28MW0020-06FD	OT-G026203	28MW0020
28MW0020A-06	OT-G026204	28MW0020A
28MW0021-07	OT-G026201	28MW0021
28MW0573-06	OT-G026601	28MW0573
28MW0575-07	OT-G026602	28MW0575
37MW0002-06	OT-G026401	37MW0002
37MW0002-06FD	OT-G026402	37MW0002
39MW0002-06	OT-G025801	39MW0002
39MW0004-06	OT-G025802	39MW0004
39MW0005A-06	OT-G025901	39MW0005A
98MW0001-06	OT-G025902	98MW0001
MAMW0512A-01	OT-G026902	MAMW0512A
MAMW0512C-01	OT-G026901	MAMW0512C
MAMW0513A-06	OT-G025401	MAMW0513A
MAMW0513A-06FD	OT-G025402	MAMW0513A
MAMW0514C-01	OT-G025501	MAMW0514C
MAMW0515A-01	OT-G025502	MAMW0515A

3.0 ANALYTICAL PARAMETERS

All groundwater samples were analyzed by Quanterra Environmental Services in Tampa, Florida, according to methods specified in the MMR *Quality Program Plan* (QPP). Quanterra is certified by Massachusetts to perform VOC analyses and is under subcontract to perform work for the plume response program at MMR.

Data quality is measured by five parameters: precision, accuracy, representativeness, completeness, and comparability (PARCC). The goals set for each of these parameters are referred to as the data quality objectives (DQOs). Actual sample and quality control results are compared to the project DQOs to determine whether quality objectives were met for the sampling event. Table A-2 lists the analysis performed for this sampling event and its respective precision and accuracy goals.

TABLE A-2
Data Quality Objectives for Analytical Methods and Accuracy, Precision, and Completeness

Analysis	Matrix ^a	Accuracy: Spike Recovery (%)	Precision: Duplicate RPD (%)	Completeness
Volatile Organic Compounds (VOCs) by EPA Method OLC02.1	Aq	CLP ^b	CLP ^b	> 95 %

Notes:

^a Aqueous (Aq) media (groundwater).

^b Precision and accuracy criteria are those specified in EPA Contract Laboratory Program (CLP) Statement of Work.
RPD - relative percent difference

Precision is defined as the degree of agreement between measurements. Sampling precision is evaluated by comparing the results of field duplicate pairs. Analytical precision is evaluated by comparing results between laboratory duplicate analyses.

Accuracy is defined as the degree to which the calculated value represents the true value. Analytical accuracy is evaluated using surrogate spike recoveries, matrix spike results, and laboratory control sample (LCS) recoveries.

Completeness is a measure of the amount of valid, usable data obtained from the sampling event compared to the amount of data that was expected under normal conditions. Valid results are data that are not qualified as rejected (coded R).

Representativeness reflects the ability to collect a sample that, when analyzed or measured, reflects the in situ conditions of the sample. Representativeness is measured by how well the sample collection event followed the proposed investigation so as to provide results that accurately depict the media and environmental conditions being evaluated. Documentation of field events confirms that proper protocols were followed.

Comparability is a measure of how well the data set parallels related data sets. Comparability was achieved by using established EPA methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions, and using standard and comprehensive reporting formats.

4.0 DISCUSSION OF NONCOMPLIANT DATA

This section discusses data that were found to be noncompliant with established quality control (QC) requirements. Qualification of results was based on laboratory QC data, which included holding times, instrument calibration results, surrogate recovery results, laboratory blank contamination, and laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results; and field QC data, which included matrix spike and matrix spike duplicate analyses, equipment blanks, and field duplicate samples.

4.1 LABORATORY QUALITY CONTROL

Laboratory QC is achieved by using established EPA analytical methods for analyzing field samples. Laboratory QC samples consist of: laboratory blanks, LCS/LCSDs, standards, and QC check samples, as indicated by the methodology. A review of the results of method-specific laboratory QC establishes the quality of the data in question. This section contains an assessment of the laboratory QC procedures, samples, and protocol.

4.1.1 Holding Times

All groundwater samples were analyzed within method-specific holding times.

4.1.2 Instrument Calibration

Several samples were analyzed in analytical batches that did not meet either initial or continuing calibration criteria for some VOCs. The affected samples, compounds, and data review qualifiers are listed in Table A-3.

TABLE A-3
Calibration Summary

Sample ID	Compound	Qualifier
00MW0570B-06	ACETONE	R
00MW0544D-06	METHYL ETHYL KETONE	R
00MW0561-06	ACETONE	R
00MW0561-06	METHYL ETHYL KETONE	R
00MW0562A-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0562A-06	ACETONE	R
00MW0562A-06	METHYL ETHYL KETONE	R
00MW0567-06	ACETONE	R
00MW0567-06	METHYL ETHYL KETONE	R
00MW0569-06	ACETONE	R
00MW0569-06	METHYL ETHYL KETONE	R
28MW0020A-06	2-HEXANONE	R
00MW0570A-06	METHYL ETHYL KETONE	R
00MW0544C-06	METHYL ETHYL KETONE	R
00MW0570B-06	METHYL ETHYL KETONE	R
28MW0020-06	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0020-06	2-HEXANONE	R
28MW0020-06	ACETONE	R
28MW0020-06	METHYL ETHYL KETONE	R
28MW0020-06FD	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0020-06FD	2-HEXANONE	R
28MW0020-06FD	ACETONE	R
28MW0020-06FD	METHYL ETHYL KETONE	R
00MP0571A-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0570A-06	ACETONE	R
00MW0537B-06	ACETONE	R
00MP0571A-06	ACETONE	R
00MP0571A-06	METHYL ETHYL KETONE	R
00MW0527-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0527-06	ACETONE	R
00MW0527-06	METHYL ETHYL KETONE	R
00MW0530-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0530-06	ACETONE	R
00MW0530-06	METHYL ETHYL KETONE	R
00MW0531-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0531-06	ACETONE	R
00MW0544D-06	ACETONE	R
00MW0537B-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0544D-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0537B-06	METHYL ETHYL KETONE	R
00MW0539A-02	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0539A-02	ACETONE	R
00MW0539A-02	METHYL ETHYL KETONE	R
00MW0542C-06	ACETONE	R
00MW0542C-06	METHYL ETHYL KETONE	R
00MW0543-05	ACETONE	R
00MW0543-05	METHYL ETHYL KETONE	R

TABLE A-3
Calibration Summary

Sample ID	Compound	Qualifier
00MW0544C-06	1,2-DIBROMO-3-CHLOROPROPANE	R
00MW0544C-06	ACETONE	R
28MW0020A-06	ACETONE	R
00MW0531-06	METHYL ETHYL KETONE	R
MAMW0513A-06	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0515A-01	METHYL ETHYL KETONE	R
39MW0005A-06	METHYL ETHYL KETONE	R
28MW0020A-06	1,2-DIBROMO-3-CHLOROPROPANE	R
98MW0001-06	ACETONE	R
98MW0001-06	METHYL ETHYL KETONE	R
MAMW0512A-01	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0512A-01	ACETONE	R
MAMW0512A-01	METHYL ETHYL KETONE	R
MAMW0512C-01	1,2-DIBROMO-3-CHLOROPROPANE	R
39MW0005A-06	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0512C-01	METHYL ETHYL KETONE	R
39MW0005A-06	ACETONE	R
MAMW0513A-06	ACETONE	R
MAMW0513A-06	METHYL ETHYL KETONE	R
MAMW0513A-06FD	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0513A-06FD	ACETONE	R
MAMW0513A-06FD	METHYL ETHYL KETONE	R
MAMW0514C-01	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0514C-01	ACETONE	R
MAMW0514C-01	METHYL ETHYL KETONE	R
MAMW0515A-01	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0515A-01	ACETONE	R
MAMW0512C-01	ACETONE	R
28MW0575-07	ACETONE	R
28MW0020A-06	METHYL ETHYL KETONE	R
28MW0021-07	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0021-07	2-HEXANONE	R
28MW0021-07	ACETONE	R
28MW0021-07	METHYL ETHYL KETONE	R
28MW0573-06	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0573-06	ACETONE	R
28MW0573-06	METHYL ETHYL KETONE	R
98MW0001-06	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0575-07	1,2-DIBROMO-3-CHLOROPROPANE	R
39MW0004-06	METHYL ETHYL KETONE	R
37MW0002-06FD	METHYL ETHYL KETONE	R
39MW0004-06	ACETONE	R
39MW0004-06	1,2-DIBROMO-3-CHLOROPROPANE	R
39MW0002-06	METHYL ETHYL KETONE	R
39MW0002-06	ACETONE	R
39MW0002-06	1,2-DIBROMO-3-CHLOROPROPANE	R
28MW0575-07	METHYL ETHYL KETONE	R

TABLE A-3
Calibration Summary

Sample ID	Compound	Qualifier
37MW0002-06FD	ACETONE	R
37MW0002-06FD	1,2-DIBROMO-3-CHLOROPROPANE	R
37MW0002-06	METHYL ETHYL KETONE	R
37MW0002-06	ACETONE	R
37MW0002-06	1,2-DIBROMO-3-CHLOROPROPANE	R
MAMW0513A-06FD	2-HEXANONE	UJ
MAMW0513A-06	2-HEXANONE	UJ
MAMW0515A-01	2-HEXANONE	UJ
00MP0571A-06	2-HEXANONE	UJ
MAMW0514C-01	2-HEXANONE	UJ

R = Rejected data point

UJ= Estimated nondetect

The results for three volatile compounds were rejected as a result of non-compliant calibrations. Acetone, methyl-ethyl-ketone and 1,2-dibromo-3-chloropropane have poor purge efficiencies and therefore, frequently have initial or continuing calibration response factors (RFs) of less than the acceptance criteria of 0.05. Method OLC-02.1 has not set the minimum RF criterion for these compounds. However, data validation guidelines require qualification for all compounds with initial or continuing calibration RFs of less than 0.05. Based on this criterion, nondetected results for acetone, methyl-ethyl-ketone, and 1,2-dibromo-3-chloropropane in associated samples were rejected (coded R). Non-detected results for 2-hexanone in four samples had continuing calibration RF criterion of less than 0.05; these results should be considered unreliable and have been rejected (coded R). Non-detected results for 2-hexanone in five other samples were qualified as estimated (coded UJ) due to non-compliant continuing calibration percent difference (%D) criterion.

4.1.3 Laboratory Blanks

Laboratory blanks were prepared and analyzed along with batches of field samples. Laboratory blanks were evaluated against their associated (same analytical batch) field samples to determine if laboratory conditions contributed to positive detects in the field samples.

Target compounds were not detected in any laboratory blanks analyzed with these samples. Therefore, qualification was not required and there is no indication of laboratory contamination that would cause data to be biased.

4.1.4 Laboratory Control Samples

Laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs) were required to be run for all analyses under the Jacob's laboratory subcontract. The results of the LCS/LCSD analyses provide information on analytical precision and accuracy.

The relative percent difference (RPD) between the bromoform recoveries in one LCS/LCSD pair was above the acceptable QC criterion. The non-detected results for bromoform in associated samples have been qualified as estimated (coded UJ). All other LCS/LCSDs analyzed with these samples were within acceptable QC criteria.

4.1.5 Matrix Spikes

One sample, collected from location 00MW0562A, was submitted for MS/MSD analyses. The RPD between the MS and MSD recoveries for the spiked compounds (1,1,2-trichloroethane, 1,2-dibromoethane [EDB], 1,2-dichloroethane, 1,4-dichlorobenzene, bromoform and cis-1,3-dichloropropene) was outside their QC criterion. The non-detected results for these compounds in this sample were qualified as estimated (coded UJ).

4.1.6 Surrogates

Surrogate spike compounds were added to each sample undergoing organic analyses to provide information for evaluating accuracy and to assess method performance and extraction efficiency. The surrogate recoveries for all VOC samples were within method acceptance criteria. Qualifications were not required.

4.1.7 Internal Standards

Internal standard area counts for the VOC analyses were within method acceptance criteria. Qualifications were not required.

4.2 FIELD QUALITY CONTROL

Field QC samples were collected to help assess analytical data quality. Field QC samples consisted of: EBs, trip blanks (for VOCs only), and field duplicate samples.

4.2.1 Field Blanks and Trip Blanks

Field blanks collected during this event consisted of 10 trip blanks (TBs), analyzed for VOCs only, and five EBs. Sample data may be qualified based on TB and EB results when the analyte in associated samples is less than five times (10 times for common laboratory contaminants) the concentration detected in the TB or EB.

Target VOCs were not detected in equipment blank samples collected 11/25/97, 12/3/97 and 12/5/97.

Ethylbenzene and total xylenes were detected at 0.84 µg/L and 5.6 µg/L, respectively, in the equipment blank (sample id: 120997-EB1-410) collected 12/9/97 associated with the sample collected from location 39MW0002. Qualifications to the data based on equipment blank contamination were not required since the sample had high levels of ethylbenzene (690 µg/L) and total xylenes (3800 µg/L). The equipment blank, collected 12/11/97 (sample id: 121197-EB1-410), associated with the sample collected from 28MW0573, had total xylenes of 0.52 µg/L. The result for total xylenes in this sample should be considered a false positive and has been qualified as undetected with an elevated detection limit.

Methylene chloride was detected at 1.3 µg/L in the trip blank collected 12/11/97 (sample id: 121197-TB1-410). Qualifications were not required based on trip blank

contamination since methylene chloride was not detected in any associated samples. Target VOCs were not detected in any other trip blanks collected during this sampling event.

4.2.2 Field Duplicate Samples

Three field duplicate samples (MAMW0513A, 28MW0020 and 37MW0002) were collected and analyzed in order to evaluate field precision. Detected VOCs in the field duplicate samples were comparable to the native samples. These results are summarized in Table A-3.

Table A-4
Field Duplicate Comparisons

Sample ID	Compound	Results	FD Results	RPD%
28MW0020-06	XYLENES, TOTAL	160.0 µg/L	150.0 µg/L	6.45
28MW0020-06	ETHYLBENZENE	40.0 µg/L	38.0 µg/L	5.13
37MW0002-06	TETRACHLOROETHYLENE (PCE)	1.5 µg/L	1.5 µg/L	0.00
MAMW0513A-06	XYLENES, TOTAL	1.2 µg/L	1.1 µg/L	8.70

FD = field duplicate

RPD = relative percent difference

5.0 DATA VALIDATION

The QC results discussed in Section 4.0 were evaluated during the data validation process. The following qualifiers were assigned to the data by the validators:

- U - The analyte was analyzed for but was not detected. The associated numerical value is a quantitation limit.
- J - The analyte was detected, and the reported concentration is an estimated value.
- UJ - The analyte is not detected and the quantitation limit is an estimated value due to QC non-compliance.
- R - The analyte value is rejected.

CLP method-specific qualifiers used by the laboratory to designate noncompliant values have been either accepted or replaced with one of the above qualifiers. Data validation qualifiers were entered into the Jacobs Relational Data Base System, from which data results for this sampling event were reported.

(intentionally blank)

APPENDIX B

Eastern Briarwood and Western Aquafarm Analytical Reports

Groundwater Monitoring Data / Round 6

Volatile Organics Ground Water	Location	00MP0571A	00MW0527	00MW0530	00MW0531	00MW0537B	00MW0539A
	Depth (ft)	0.00	53.00	57.70	50.00	78.50	105.75
	Matrix	WG	WG	WG	WG	WG	WG
	Sample Type	N1	N1	N1	N1	N1	N1
	Field Date	12/5/97	12/11/97	12/15/97	12/12/97	12/12/97	12/15/97
Field Lot	Field Lot	001A	001A	001A	001A	001A	001A
Units	Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
1,1,1-TRICHLOROETHANE	2.2	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
1,1-DICHLOROETHANE	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
1,1-DICHLOROETHENE	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE	R	R	R	R	R	R	R
1,2-DIBROMOETHANE (EDB)	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,2-DICHLOROETHANE	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
2-HEXANONE	3.9 UJ	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
ACETONE	R	R	R	R	R	R	R
BENZENE	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
BROMOCHLOROMETHANE	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
BROMODICHLOROMETHANE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
BROMOFORM	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
BROMOMETHANE	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
CARBON DISULFIDE	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
CARBON TETRACHLORIDE	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
CHLOROBENZENE	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
CHLOROETHANE	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
CHLOROFORM	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
CHLOROMETHANE	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
ETHYLBENZENE	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ETHYL KETONE	R	R	R	R	R	R	R
METHYL ISOBUTYL KETONE	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
METHYLENE CHLORIDE	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
STYRENE	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)	3.2	0.43 J	0.41 U	1.4	0.41 U	0.41 U	0.41 U



Jacobs Engineering Group, Inc.

Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

00MP0571A

Location

Depth (ft)

Matrix

Sample Type

Field Date

Field Lot

Units

0.00

WG

N1

12/5/97

001A

UG/L

00MW0527

53.00

WG

N1

12/11/97

001A

UG/L

00MW0530

57.70

WG

N1

12/15/97

001A

UG/L

00MW0531

50.00

WG

N1

12/12/97

001A

UG/L

00MW0537B

78.50

WG

N1

12/12/97

001A

UG/L

00MW0539A

105.75

WG

N1

12/15/97

001A

UG/L

TOLUENE

TRANS-1,2-DICHLOROETHENE

TRANS-1,3-DICHLOROPROPENE

TRICHLOROETHYLENE (TCE)

VINYL CHLORIDE

XYLENES, TOTAL

0.5 U

0.57 U

0.57 U

0.62 U

0.61 U

0.5 U

0.5 U

0.57 U

0.57 U

0.62 U

0.61 U

0.5 U

0.5 U

0.57 U

0.57 U

0.79 J

0.61 U

0.5 U

0.5 U

0.57 U

0.57 U

0.62 U

0.61 U

0.5 U

0.5 U

0.57 U

0.57 U

0.62 U

0.61 U

0.5 U



Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

Location
Depth (ft)
Matrix
Sample Type
Field Date
Field Lot
Units

00MW0542C	17.00	WG	N1	12/1/97	001A	UG/L	0.5 U	0.57 U	0.57 U	0.62 U	0.61 U	0.5 U
00MW0543	31.38	WG	N1	12/1/97	001A	UG/L	0.5 U	0.57 U	0.57 U	0.62 U	0.61 U	0.5 U
00MW0544C	19.00	WG	N1	12/3/97	001A	UG/L	0.5 U	0.57 U	0.57 U	0.62 U	0.61 U	0.5 U
00MW0544D	10.50	WG	N1	12/3/97	011A	UG/L	0.5 U	0.57 U	0.57 U	0.62 U	0.61 U	0.5 U
00MW0561	53.00	WG	N1	12/12/97	001A	UG/L	0.5 U	0.57 U	0.57 U	1.4	0.61 U	0.5 U
00MW0562A	133.00	WG	N1	12/12/97	001A	UG/L	0.5 U	0.57 U	0.57 U	0.62 U	0.61 U	0.5 U

TOLUENE

TRANS-1,2-DICHLOROETHENE

TRANS-1,3-DICHLOROPROPENE

TRICHLOROETHYLENE (TCE)

VINYL CHLORIDE

XYLENES, TOTAL

Groundwater Monitoring Data / Round 6

Volatile Organics Ground Water	Location	00MW0562A	00MW0562A	00MW0567	00MW0569	00MW0570A	00MW0570B
	Depth (ft)	133.00	133.00	65.00	29.50	77.50	32.50
	Matrix	WG	WG	WG	WG	WG	WG
	Sample Type	SD1	MS1	N1	N1	N1	N1
	Field Date	12/12/97	12/12/97	11/25/97	11/25/97	11/24/97	11/24/97
Field Lot	000A	000A	001A	011A	001A	001A	001A
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
1,1,1-TRICHLOROETHANE			0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE			0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE	5.9	4.7	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
1,1-DICHLOROETHANE			0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
1,1-DICHLOROETHENE			0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE			0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE			0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
1,2-DIBROMOETHANE (EDB)	5.8	4.7	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE			0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,2-DICHLOROETHANE	6.4	4.9	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE	5.9	4.9	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE			0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE	6	4.8	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
2-HEXANONE			3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
ACETONE			R	R	R	R	R
BENZENE	6	5	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
BROMOCHLOROMETHANE			0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
BROMODICHLOROMETHANE			0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
BROMOFORM	5.3	4.2	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
BROMOMETHANE			0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
CARBON DISULFIDE			0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
CARBON TETRACHLORIDE	5.6	4.6	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
CHLOROBENZENE			0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
CHLOROETHANE			0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
CHLOROFORM			0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
CHLOROMETHANE			0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE			0.98 J	7.9	0.58 U	1.3	0.58 U
CIS-1,3-DICHLOROPROPENE	5.8	4.7	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE			0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
ETHYLBENZENE			0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ETHYL KETONE			R	R	R	R	R
METHYL ISOBUTYL KETONE			3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
METHYLENE CHLORIDE			0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
STYRENE			0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER			0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)	7	5.8	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U

Groundwater Monitoring Data / Round 6

Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

Volatile Organics Ground Water	Location	00MW0562A	133.00	65.00	29.50	77.50	32.50
	Depth (ft)	133.00	WG	WG	WG	WG	WG
	Matrix	WG	WG	N1	N1	N1	N1
	Sample Type	SD1	MS1	N1	11/25/97	11/24/97	11/24/97
	Field Date	12/12/97	12/12/97	11/25/97	001A	001A	001A
	Field Lot	000A	000A	011A	UG/L	UG/L	UG/L
	Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
	<hr/>						
	TOLUENE			0.5 U	0.5 U	0.5 U	0.5 U
	TRANS-1,2-DICHLOROETHENE			0.57 U	0.57 U	0.57 U	0.57 U
TRANS-1,3-DICHLOROPROPENE			0.57 U	0.57 U	0.57 U	0.57 U	
TRICHLOROETHYLENE (TCE)			5.9	13	0.62 U	4.7	
VINYL CHLORIDE	6	5.1	0.61 U	0.61 U	0.61 U	0.61 U	
XYLENES, TOTAL	5	4.1	0.5 U	0.5 U	0.5 U	0.5 U	

Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

Location	Depth (ft)	Matrix	Sample Type	Field Date	Field Lot	Units	28MW0020	28MW0020A	28MW0021	28MW0573	28MW0575
	78.00	WG	N1	12/10/97	001A	UG/L	3.60 U	136.00	84.00	95.50	60.20
								WG	WG	WG	
								N1	N1	N1	
								12/10/97	12/10/97	12/11/97	12/11/97
								001A	001A	001A	001A
								UG/L	UG/L	UG/L	UG/L
1,1,1-TRICHLOROETHANE	3.60 U						3.60 U	0.710 U	3.60 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE	3.00 U						3.00 U	0.600 U	3.00 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE	3.00 U						3.00 U	0.590 U	3.00 U	0.59 U	0.59 U
1,1-DICHLOROETHANE	3.20 U						3.20 U	0.640 U	3.20 U	0.64 U	0.64 U
1,1-DICHLOROETHENE	3.40 U						3.40 U	0.690 U	3.40 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE	3.80 U						3.80 U	0.760 U	3.80 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE											
1,2-DIBROMOETHANE (EDB)											
1,2-DICHLOROBENZENE	2.60 U						2.60 U	0.530 U	2.60 U	0.53 U	0.53 U
1,2-DICHLOROETHANE	2.40 U						2.40 U	0.490 U	2.40 U	0.49 U	0.49 U
1,2-DICHLOROETHANE	2.90 U						2.90 U	0.580 U	2.90 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE	3.40 U						3.40 U	0.680 U	3.40 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE	2.40 U						2.40 U	0.490 U	2.40 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE	2.60 U						2.60 U	0.520 U	2.60 U	0.52 U	0.52 U
2-HEXANONE											
ACETONE											
BENZENE	3.40 U						3.40 U	0.690 U	3.40 U	0.69 U	0.69 U
BROMOCHLOROMETHANE	2.80 U						2.80 U	0.570 U	2.80 U	0.57 U	0.57 U
BROMODICHLOROMETHANE	3.00 U						3.00 U	0.600 U	3.00 U	0.6 U	0.6 U
BROMOFORM	2.00 U						2.00 U	0.400 U	2.00 U	0.4 U	0.4 U
BROMOMETHANE	4.10 U						4.10 U	0.820 U	4.10 U	0.82 U	0.82 U
CARBON DISULFIDE	3.10 U						3.10 U	0.620 U	3.10 U	0.62 U	0.62 U
CARBON TETRACHLORIDE	3.20 U						3.20 U	0.640 U	3.20 U	0.64 U	0.64 U
CHLOROBENZENE	2.00 U						2.00 U	0.400 U	2.00 U	0.4 U	0.4 U
CHLOROETHANE	3.60 U						3.60 U	0.710 U	3.60 U	0.71 U	0.71 U
CHLOROFORM	3.00 U						3.00 U	0.600 U	3.00 U	0.6 U	0.6 U
CHLOROMETHANE	3.40 U						3.40 U	0.670 U	3.40 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE	2.90 U						2.90 U	0.580 U	2.90 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE	2.90 U						2.90 U	0.580 U	2.90 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE	2.80 U						2.80 U	0.550 U	2.80 U	0.55 U	0.55 U
ETHYLBENZENE	40.0						38.0	0.500 U	19.0	0.5 U	2.6
METHYL ETHYL KETONE											
METHYL ISOBUTYL KETONE											
METHYLENE CHLORIDE	18.0 U						18.0 U	3.60 U	18.0 U	3.6 U	3.6 U
STYRENE	3.20 U						3.20 U	0.650 U	3.20 U	0.65 U	0.65 U
TERT-BUTYL METHYL ETHER	2.40 U						2.40 U	0.480 U	2.40 U	0.48 U	0.48 U
TETRACHLOROETHYLENE (PCE)	3.40 U						3.40 U	0.670 U	3.40 U	0.67 U	0.67 U
	2.00 U						2.00 U	0.410 U	2.00 U	0.41 U	0.41 U



Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

Location
Depth (ft)
Matrix
Sample Type
Field Date
Field Lot
Units

28MW0020
78.00
WG
N1
12/10/97
001A
UG/L

28MW0020
78.00
WG
FD1
12/10/97
001A
UG/L

28MW0020A
136.00
WG
N1
12/10/97
001A
UG/L

28MW0021
84.00
WG
N1
12/10/97
001A
UG/L

28MW0573
95.50
WG
N1
12/11/97
011A
UG/L

28MW0575
60.20
WG
N1
12/11/97
001A
UG/L

TOLUENE

TRANS-1,2-DICHLOROETHENE
2.50 U
2.80 U

TRANS-1,3-DICHLOROPROPENE
2.80 U

TRICHLOROETHYLENE (TCE)
3.10 U

VINYL CHLORIDE
3.00 U

XYLENES, TOTAL
160.

2.50 U

2.80 U

2.80 U

3.10 U

3.00 U

150.

0.500 U

0.570 U

0.570 U

0.620 U

0.610 U

0.500 U

2.50 U

2.80 U

2.80 U

3.10 U

3.00 U

140.

0.5 U

0.57 U

0.57 U

0.62 U

0.61 U

0.66 U

1

Groundwater Monitoring Data / Round 6

Volatile Organics Ground Water	Location	37MW0002	37MW0002	39MW0002	39MW0004	39MW0005A	98MW0001
	Depth (ft)	47.00	47.00	54.32	45.00	64.00	57.00
	Matrix	WG	WG	WG	WG	WG	WG
	Sample Type	N1	FD1	N1	N1	N1	N1
	Field Date	12/11/97	12/11/97	12/9/97	12/9/97	12/9/97	12/9/97
Field Lot	Field Lot	001A	001A	011A	001A	001A	001A
Units	Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
1,1,1-TRICHLOROETHANE		0.71 U	0.71 U	71 U	0.71 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE		0.6 U	0.6 U	60 U	0.6 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE		0.59 U	0.59 U	59 U	0.59 U	0.59 U	0.59 U
1,1-DICHLOROETHANE		0.64 U	0.64 U	64 U	0.64 U	0.64 U	0.64 U
1,1-DICHLOROETHENE		0.69 U	0.69 U	69 U	0.69 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE		0.76 U	0.76 U	76 U	0.76 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE		R	R	R	R	R	R
1,2-DIBROMOETHANE (EDB)		0.53 U	0.53 U	53 U	0.53 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE		0.49 U	0.49 U	49 U	0.49 U	0.49 U	0.49 U
1,2-DICHLOROETHANE		0.58 U	0.58 U	58 U	0.58 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE		0.68 U	0.68 U	68 U	0.68 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE		0.49 U	0.49 U	49 U	0.49 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE		0.52 U	0.52 U	52 U	0.52 U	0.52 U	0.52 U
2-HEXANONE		3.9 U	3.9 U	390 U	3.9 U	3.9 U	3.9 U
ACETONE		R	R	R	R	R	R
BENZENE		0.69 U	0.69 U	69 U	0.69 U	0.69 U	0.69 U
BROMOCHLOROMETHANE		0.57 U	0.57 U	57 U	0.57 U	0.57 U	0.57 U
BROMODICHLOROMETHANE		0.6 U	0.6 U	60 U	0.6 U	0.6 U	0.6 U
BROMOFORM		0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.4 U
BROMOMETHANE		0.82 U	0.82 U	82 U	0.82 U	0.82 U	0.82 U
CARBON DISULFIDE		0.62 U	0.62 U	62 U	0.62 U	0.62 U	0.62 U
CARBON TETRACHLORIDE		0.64 U	0.64 U	64 U	0.64 U	0.64 U	0.64 U
CHLOROBENZENE		0.4 U	0.4 U	40 U	0.4 U	0.4 U	0.4 U
CHLOROETHANE		0.71 U	0.71 U	71 U	0.71 U	0.71 U	0.71 U
CHLOROFORM		0.6 U	0.6 U	60 U	0.6 U	0.6 U	0.6 U
CHLOROMETHANE		0.67 U	0.67 U	67 U	0.67 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE		0.58 U	0.58 U	58 U	0.58 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE		0.58 U	0.58 U	58 U	0.58 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE		0.55 U	0.55 U	55 U	0.55 U	0.55 U	0.55 U
ETHYLBENZENE		0.5 U	0.5 U	690	27	0.5 U	0.5 U
METHYL ETHYL KETONE		R	R	R	R	R	R
METHYL ISOBUTYL KETONE		3.6 U	3.6 U	360 U	3.6 U	3.6 U	3.6 U
METHYLENE CHLORIDE		0.65 U	0.65 U	65 U	0.65 U	0.65 U	0.65 U
STYRENE		0.48 U	0.48 U	48 U	0.48 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER		0.67 U	0.67 U	67 U	0.67 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)		1.5	1.5	41 U	0.41 U	0.41 U	3.3

Groundwater Monitoring Data / Round 6

Volatile Organics
Ground Water

	Location	Depth (ft)	Matrix	Sample Type	Field Date	Field Lot	Units	37MW0002	37MW0002	30MW0002	30MW0004	30MW0005A	98MW0001
								47.00	47.00	54.32	45.00	04.00	57.00
			WG	N1	12/11/97	001A	UG/L	WG	WG	WG	WG	WG	WG
								N1	N1	N1	N1	N1	N1
								12/11/97	12/11/97	12/9/97	12/9/97	12/9/97	12/9/97
								001A	001A	011A	001A	001A	001A
								UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
TOLUENE								0.5 U	0.5 U	50 U	1.0 J	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE								0.57 U	0.57 U	57 U	0.57 U	0.57 U	0.57 U
TRANS-1,3-DICHLOROPROPENE								0.57 U	0.57 U	57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHYLENE (TCE)								0.02 U	0.02 U	02 U	0.02 U	0.02 U	0.02 U
VINYL CHLORIDE								0.01 U	0.01 U	01 U	0.01 U	0.01 U	0.01 U
XYLENES, TOTAL								0.5 U	0.5 U	3800	76	0.5 U	0.5 U



Groundwater Monitoring Data / Round 6

Volatile Organics

Ground Water

	Location	MAMW0512A	MAMW0512C	MAMW0513A	MAMW0513A	MAMW0513A	MAMW0514C	MAMW0515A
	Depth (ft)	125.50	84.50	79.40	79.40	79.40	80.00	105.00
	Matrix	WG	WG	WG	WG	WG	WG	WG
	Sample Type	N1	N1	N1	N1	FD1	N1	N1
	Field Date	12/12/97	12/12/97	12/5/97	12/5/97	12/5/97	12/5/97	12/5/97
	Field Lot	001A	001A	001A	001A	001A	001A	011A
	Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
TOLUENE		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE		0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRANS-1,3-DICHLOROPROPENE		0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHYLENE (TCE)		0.93 J	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
VINYL CHLORIDE		0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
XYLENES, TOTAL		0.56 J	0.5 U	1.2	1.1	0.5 U	0.5 U	0.5 U

Volatile Organics Water QC	Location Depth (ft) Matrix Sample Type Field Date Field Lot Units	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
		0.00	WQ	TB1	11/25/97	001A	UG/L
1,1,1-TRICHLOROETHANE		0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE		0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U
1,1-DICHLOROETHANE		0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
1,1-DICHLOROETHENE		0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE		0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	R
1,2-DIBROMOETHANE (EDB)		0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,2-DICHLOROETHANE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE		0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE		0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.52 U
2-HEXANONE		3.9 U	3.9 U	3.9 U	3.9 U	3.9 U	3.9 U
ACETONE		R	R	R	R	R	R
BENZENE		0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U
BROMOCHLOROMETHANE		0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
BROMODICHLOROMETHANE		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
BROMOFORM		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
BROMOMETHANE		0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.82 U
CARBON DISULFIDE		0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
CARBON TETRACHLORIDE		0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
CHLOROBENZENE		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
CHLOROETHANE		0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
CHLOROFORM		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U
CHLOROMETHANE		0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE		0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.55 U
ETHYLBENZENE		0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
METHYL ETHYL KETONE		R	R	R	R	R	R
METHYL ISOBUTYL KETONE		3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
METHYLENE CHLORIDE		0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.65 U
STYRENE		0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER		0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)		0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.41 U

Groundwater Monitoring Data / Round 6

Volatile Organics

Water QC

Location
Depth (ft)
Matrix
Sample Type
Field Date
Field Lot
Units

FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
0.00	0.00	0.00	0.00	0.00	0.00
WQ	WQ	WQ	WQ	WQ	WQ
TB1	TB1	TB1	EB1	TB1	EB1
11/24/97	12/1/97	12/3/97	11/25/97	12/3/97	12/3/97
001A	001A	001A	010A	001A	010A
UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.62 U
0.61 U	0.61 U	0.61 U	0.61 U	0.61 U	0.61 U
0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
TOLUENE					
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE (TCE)					
VINYL CHLORIDE					
XYLENES, TOTAL					

Volatile Organics Water QC	Location	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
	Depth (ft)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Matrix	WQ	WQ	WQ	WQ	WQ	WQ	WQ	WQ
	Sample Type	TB1	EB1	TB1	EB1	TB1	TB1	TB1	TB1
	Field Date	12/5/97	12/5/97	12/9/97	12/5/97	12/9/97	12/10/97	12/11/97	12/11/97
	Field Lot	001A	010A	001A	010A	001A	001A	001A	001A
	Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
	1,1,1-TRICHLOROETHANE	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U
	1,1,2,2-TETRACHLOROETHANE	0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.600 U	0.6 U	0.6 U
	1,1,2-TRICHLOROETHANE	0.59 U	0.59 U	0.59 U	0.59 U	0.59 U	0.590 U	0.59 U	0.59 U
1,1-DICHLOROETHANE		0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.640 U	0.64 U	0.64 U
1,1-DICHLOROETHENE		0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.690 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE		0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.760 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE		R	R	R	R	R	R	R	R
1,2-DIBROMOETHANE (EDB)		0.53 U	0.53 U	0.53 U	0.53 U	0.53 U	0.530 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.490 U	0.49 U	0.49 U
1,2-DICHLOROETHANE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.580 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE		0.68 U	0.68 U	0.68 U	0.68 U	0.68 U	0.680 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U	0.49 U	0.49 U	0.490 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE		0.52 U	0.52 U	0.52 U	0.52 U	0.52 U	0.520 U	0.52 U	0.52 U
2-HEXANONE		3.9 UJ	3.9 UJ	3.9 U	3.9 U	3.9 U	R	3.9 U	3.9 U
ACETONE		R	R	R	R	R	R	R	R
BENZENE		0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.690 U	0.69 U	0.69 U
BROMOCHLOROMETHANE		0.57 U	0.57 U	0.57 U	0.57 U	0.57 U	0.570 U	0.57 U	0.57 U
BROMODICHLOROMETHANE		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.600 U	0.6 U	0.6 U
BROMOFORM		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.400 U	0.4 U	0.4 U
BROMOMETHANE		0.82 U	0.82 U	0.82 U	0.82 U	0.82 U	0.820 U	0.82 U	0.82 U
CARBON DISULFIDE		0.62 U	0.62 U	0.62 U	0.62 U	0.62 U	0.620 U	0.62 U	0.62 U
CARBON TETRACHLORIDE		0.64 U	0.64 U	0.64 U	0.64 U	0.64 U	0.640 U	0.64 U	0.64 U
CHLOROBENZENE		0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.400 U	0.4 U	0.4 U
CHLOROETHANE		0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.710 U	0.71 U	0.71 U
CHLOROFORM		0.6 U	0.6 U	0.6 U	0.6 U	0.6 U	0.600 U	0.6 U	0.6 U
CHLOROMETHANE		0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.670 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.580 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE		0.58 U	0.58 U	0.58 U	0.58 U	0.58 U	0.580 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE		0.55 U	0.55 U	0.55 U	0.55 U	0.55 U	0.550 U	0.55 U	0.55 U
ETHYLBENZENE		0.5 U	0.5 U	0.5 U	0.5 U	0.84 J	0.500 U	0.5 U	0.5 U
METHYL ETHYL KETONE		R	R	R	R	R	R	R	R
METHYL ISOBUTYL KETONE		3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.60 U	3.6 U	3.6 U
METHYLENE CHLORIDE		0.65 U	0.65 U	0.65 U	0.65 U	0.65 U	0.650 U	1.3 J	1.3 J
STYRENE		0.48 U	0.48 U	0.48 U	0.48 U	0.48 U	0.480 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER		0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.670 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)		0.41 U	0.41 U	0.41 U	0.41 U	0.41 U	0.410 U	0.41 U	0.41 U



Groundwater Monitoring Data / Round 6

Volatile Organics

Water QC

Location	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Depth (ft)	0.00	0.00	0.00	0.00	0.00	0.00
Matrix	WQ	WQ	WQ	WQ	WQ	WQ
Sample Type	TB1	EB1	TB1	EB1	TB1	TB1
Field Date	12/5/97	12/5/97	12/9/97	12/9/97	12/10/97	12/11/97
Field Lot	001A	010A	001A	010A	001A	001A
Units	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L

TOLUENE

0.5 U	0.5 U	0.5 U	0.5 U	0.500 U	0.5 U
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TRANS-1,2-DICHLOROETHENE

0.57 U	0.57 U	0.57 U	0.57 U	0.570 U	0.57 U
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TRANS-1,3-DICHLOROPROPENE

0.57 U	0.57 U	0.57 U	0.57 U	0.570 U	0.57 U
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TRICHLOROETHYLENE (TCE)

0.62 U	0.62 U	0.62 U	0.62 U	0.620 U	0.62 U
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VINYL CHLORIDE

0.61 U	0.61 U	0.61 U	0.61 U	0.610 U	0.61 U
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XYLENES, TOTAL

0.5 U	0.5 U	5.6	0.5 U	0.500 U	0.5 U
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Groundwater Monitoring Data / Round 6

Volatile Organics Water QC	Location Depth (ft) Matrix Sample Type Field Date Field Lot Units	FIELDQC	FIELDQC	FIELDQC
		0.00	0.00	0.00
		WQ	WQ	WQ
		EB1	TB1	TB1
		12/11/97	12/12/97	12/15/97
		010A	001A	001A
		UG/L	UG/L	UG/L
1,1,1-TRICHLOROETHANE		0.71 U	0.71 U	0.71 U
1,1,2,2-TETRACHLOROETHANE		0.6 U	0.6 U	0.6 U
1,1,2-TRICHLOROETHANE		0.59 U	0.59 U	0.59 U
1,1-DICHLOROETHANE		0.64 U	0.64 U	0.64 U
1,1-DICHLOROETHENE		0.69 U	0.69 U	0.69 U
1,2,4-TRICHLOROBENZENE		0.76 U	0.76 U	0.76 U
1,2-DIBROMO-3-CHLOROPROPANE		R	R	R
1,2-DIBROMOETHANE (EDB)		0.53 U	0.53 U	0.53 U
1,2-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U
1,2-DICHLOROETHANE		0.58 U	0.58 U	0.58 U
1,2-DICHLOROPROPANE		0.68 U	0.68 U	0.68 U
1,3-DICHLOROBENZENE		0.49 U	0.49 U	0.49 U
1,4-DICHLOROBENZENE		0.52 U	0.52 U	0.52 U
2-HEXANONE		3.9 U	3.9 U	3.9 U
ACETONE		R	R	R
BENZENE		0.69 U	0.69 U	0.69 U
BROMOCHLOROMETHANE		0.57 U	0.57 U	0.57 U
BROMODICHLOROMETHANE		0.6 U	0.6 U	0.6 U
BROMOFORM		0.4 U	0.4 U	0.4 U
BROMOMETHANE		0.82 U	0.82 U	0.82 U
CARBON DISULFIDE		0.62 U	0.62 U	0.62 U
CARBON TETRACHLORIDE		0.64 U	0.64 U	0.64 U
CHLOROBENZENE		0.4 U	0.4 U	0.4 U
CHLOROETHANE		0.71 U	0.71 U	0.71 U
CHLOROFORM		0.6 U	0.6 U	0.6 U
CHLOROMETHANE		0.67 U	0.67 U	0.67 U
CIS-1,2-DICHLOROETHENE		0.58 U	0.58 U	0.58 U
CIS-1,3-DICHLOROPROPENE		0.58 U	0.58 U	0.58 U
DIBROMOCHLOROMETHANE		0.55 U	0.55 U	0.55 U
ETHYLBENZENE		0.5 U	0.5 U	0.5 U
METHYL ETHYL KETONE		R	R	R
METHYL ISOBUTYL KETONE		3.6 U	3.6 U	3.6 U
METHYLENE CHLORIDE		0.65 U	0.65 U	0.65 U
STYRENE		0.48 U	0.48 U	0.48 U
TERT-BUTYL METHYL ETHER		0.67 U	0.67 U	0.67 U
TETRACHLOROETHYLENE (PCE)		0.41 U	0.41 U	0.41 U

Groundwater Monitoring Data / Round 6

Volatile Organics

Water QC

Location	FIELDQC	FIELDQC	FIELDQC
Depth (ft)	0.00	0.00	0.00
Matrix	WQ	WQ	WQ
Sample Type	EB1	TB1	TB1
Field Date	12/11/97	12/12/97	12/15/97
Field Lot	010A	001A	001A
Units	UG/L	UG/L	UG/L

TOLUENE	0.5 U	0.5 U	0.5 U
TRANS-1,2-DICHLOROETHENE	0.57 U	0.57 U	0.57 U
TRANS-1,3-DICHLOROPROPENE	0.57 U	0.57 U	0.57 U
TRICHLOROETHYLENE (TCE)	0.62 U	0.62 U	0.62 U
VINYL CHLORIDE	0.61 U	0.61 U	0.61 U
XYLENES, TOTAL	0.52 J	0.5 U	0.5 U

APPENDIX C

Eastern Briarwood and Western Aquafarm Field Data Forms



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : 98 EASTERN BRIARWOOD Well Number: 98MW0001

Arrival Date/Sample Time: 12/9/97 / 1210

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11042</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u> </u>	

Weather : Sunny, SLIGHT WIND 0-5 MPH, Temps In 40's

Well Total Depth : 62.28 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 53.97 ft BTOC.

Minimum Purge Required : 17.4 GAL

(10')
Screened Interval : 52.28 - 62.28 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 57' ft BTOC

Total Purge Conducted : 25 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate NO ✓. YES Well Number :

MS MSD Sample: NO ✓. YES Well Number :

Rinsate Blank: NO ✓. YES Well Number :

Field Blank: NO ✓. YES Well Number :

TRIP BLANK YES 98MW0001

Sample Crew (Print): Doug Coppi

DAVE DELMARCO

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C) <small>Stab. Para. (± 3%)</small>	Sp. Cond. (mS/cm) <small>Stab. Para. (± 3%)</small>	DO* (mg/L) <small>Stab. Para. (± 10%)</small>	pH <small>Stab. Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Stab. Para. (± 10%)</small>	Field Parameters
1200	X	13.90	0.201	10.97	5.76	177.1	1.4	6 th to Final Field Parameter
	X	13.97	0.201	10.73	5.74	188.6	0.4	5 th to Final Field Parameter
	X	14.11	0.199	10.94	5.74	195.9	0.3	4 th to Final Field Parameters
	X	14.10	0.202	10.68	5.74	202.2	0.0	3 rd to Final Field Parameters
	X	13.77	0.201	10.85	5.72	209.5	0.0	2 nd to Final Field Parameters
↓	25	13.72	0.201	11.01	5.72	214.0	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PROVA SN: 11353 Calibration Date: 12/9/97 Initials: D.C.

YSI SN: 11048 Calibration Date: 12/9/97 Initials: D.C.

Field measurement protocols followed with no exceptions (N*) Form completed by: [Signature] Date: 12/9/97

*Field Deviations Made: None

EP 12/9/97

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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EAST BLAIRWOOD Well Number: 37mw0002
Arrival Date/Sample Time: 12/11/97 / 1205
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11034</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used _____	

Weather: WINDY, 10-15 mph, COOL TEMPS IN 40's, OVERCAST & FLURRIES

Well Total Depth : 52.03 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 45.37 ft BTOC.
Minimum Purge Required : 87.4 GAL

(10')

Screened Interval : 42.03 - 52.03 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 47' ft BTOC
Total Purge Conducted : 20 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ☐ YES ☒ Well Number: 374W0002
 MIS/MSD Sample: NO ☒ YES ☐ Well Number: _____
 Rinsate Blank: NO ☒ YES ☐ Well Number: _____
 Field Blank: NO ☒ YES ☐ Well Number: _____

Sample Crew (Print): Doug Ceppi _____
FRANK LEBIANC _____

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gall/min)	Total Purge (gal)	Temp (°C)	Sp. Cond. (µS/cm)	DO ^b (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
		Sub. Para. (± 1%)	Sub. Para. (± 1%)	Sub. Para. (± 10%)	Sub. Para. (± 0.1)	Not Applicable	Sub. Para. (± 10%)	
1200	X	12.75	0.190	9.15	5.26	245.5	-0.2	6 th to Final Field Parameter
	X	13.06	0.191	9.13	5.22	257.5	-0.4	5 th to Final Field Parameter
	X	13.05	0.193	9.09	5.21	267.0	-0.6	4 th to Final Field Parameters
	X	13.08	0.193	9.05	5.20	272.0	-0.6	3 rd to Final Field Parameters
	X	13.08	0.193	9.04	5.20	276.1	-0.7	2 nd to Final Field Parameters
20		13.35	0.194	9.01	5.20	280.4	-0.7	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PHDTM V/A SN: 11353 Calibration Date: 12/11/97 Initials: DC

YSI SN: 11046 Calibration Date: 12/11/97 Initials: DC

Field measurement protocols followed with no exceptions (V/N^o) Form completed by: Kaegele & Gopp Date: 12/11/97

*Field Deviations Made: Turbidity (-) values out of potential stable range, significant, based

on all other parameters.

-EP 12/12/97

Comment: 106 Bore 35K78410 F1-0007, refer to comment sheet p.94



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : E. Briarwood Well Number: MAMW0512 A
Arrival Date/Sample Time: 12/12/97 1 10:05
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11038</u>	Pump Length <u>200</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Cloudy 35°

Well Total Depth : 128.1 ft BTOC. Screened Interval : 123.1-128.1 ft BTOC.
Background PID Reading : 0.0 PPM. Well PID Reading : 0.0 PPM.
Static Water Level : 50.59 ft BTOC. Pump Set Depth : 125.5 ft BTOC.
Minimum Purge Required : 8.7 gallons Total Purge Conducted : 15 gal/10ms

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<u>n/a</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES Well Number :
MS/MSD Sample: NO ☒ YES Well Number : A1
Rinsate Blank: NO ☒ YES Well Number : a
Field Blank: NO ☒ YES Well Number :

Sample Crew (Print):

Aaron Silva
Brian E. Bosen

n/a

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal /min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
	X	12.18	0.118	9.22	5.70	343.1	1.1	6 th to Final Field Parameter
	X	12.33	0.120	9.41	5.41	345.4	0.4	5 th to Final Field Parameter
	X	12.57	0.123	9.42	5.38	346.6	0.3	4 th to Final Field Parameters
	X	12.68	0.124	9.30	5.35	349.5	0.2	3 rd to Final Field Parameters
	X	12.72	0.125	9.25	5.34	352.8	0.1	2 nd to Final Field Parameters
15		12.79	0.126	9.27	5.33	356.0	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU, Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11356 Calibration Date: 12/12/97 Initials: AS
 YSI SN: 11264 Calibration Date: 12/12/97 Initials: AS

Field measurement protocols followed with no exceptions (Y) / (N*) Form completed by: Carol L. Lill Date: 12/12/97

*Field Deviations Made: n/a



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Briarwood Well Number: MAMW0512C

Arrival Date/Sample Time: 12/12/97 | 11:00

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11037</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Cloudy 35°

Well Total Depth : 87.0 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 49.35 ft BTOC.

Minimum Purge Required : 8.7 gallons

Screened Interval : 82.0-87.0 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 84.5 ft BTOC

Total Purge Conducted : 15 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<input checked="" type="checkbox"/>	EDB	USEPA 504.1	None

Q.A. QC Sampling: Sample Duplicate: NO 1 YES 1 Well Number : n/a
MS/MSD Sample: NO 1 YES 1 Well Number : n/a
Rinsate Blank: NO 1 YES 1 Well Number : n/a
Field Blank: NO 1 YES 1 Well Number : n/a

Sample Crew (Print):

Aaron Silva
Brian Gibson

n/a

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200	X	12.16	0.062	12.62	5.32	347.2	0.4	6 th to Final Field Parameter
	X	12.73	0.062	11.85	5.28	351.7	0.9	5 th to Final Field Parameter
	X	12.91	0.062	11.47	5.28	354.1	0.2	4 th to Final Field Parameters
	X	13.02	0.062	11.29	5.26	357.5	0.3	3 rd to Final Field Parameters
	X	13.11	0.062	11.16	5.27	359.1	0.2	2 nd to Final Field Parameters
15		13.20	0.062	11.15	5.28	360.8	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11356 Calibration Date: 12/12/97 Initials: AS

YSI SN: 11264 Calibration Date: 12/12/97 Initials: AS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Sam L. L. L. Date: 12/12/97

*Field Deviations Made: 11/12

SP 12/19/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : E. Barnwood / W. Aqueduct Well Number: MAMW0515A
Arrival Date/Sample Time: 12/5/97 1 11:40
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11373</u>	Pump Length <u>200</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Drizzle 45°

Well Total Depth : 107.86 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 30.70 ft BTOC.
Minimum Purge Required : 8.7 gallons

Screened Interval : 102.86 - 107.86 ft BTOC.
Well PID Reading : 18.0 PPM.
Pump Set Depth : 105 ft BTOC
Total Purge Conducted : 17.92 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>/</u>	VOCs	OLC 02.0	HCL to pH < 2
<u>n/a</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO / YES / Well Number: N/A
MS-MSD Sample: NO / YES / Well Number: N/A
Rinsate Blank: NO / YES / Well Number: N/A
Field Blank: NO / YES / Well Number: N/A

Sample Crew (Print):

Arnon Silva

M. Ke Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
	X	12.83	0.128	11.19	5.60	385.3	8.4	6 th to Final Field Parameter
	X	12.82	0.130	10.97	5.63	391.0	6.5	5 th to Final Field Parameter
	X	12.86	0.130	10.56	5.64	395.5	4.8	4 th to Final Field Parameters
	X	13.09	0.129	10.33	5.66	398.3	3.3	3 rd to Final Field Parameters
	X	13.17	0.128	10.10	5.66	400.9	2.6	2 nd to Final Field Parameters
	17	13.20	0.127	10.04	5.67	403.1	2.3	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/5/97 Initials: AS
 YSI SN: 11264 Calibration Date: 12/5/97 Initials: AS

Field measurement protocols followed with no exceptions (Y / N*) Form completed by: Don L. L. A. Date: 12/5/97

*Field Deviations Made:

W / A



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : Easton Branch Well Number: COMW0530
Arrival Date/Sample Time: 12/15/97 / 1025
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11034</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used _____	

Weather : Cold, windy, sunny

Well Total Depth : 60.22 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 55.25 ft BTOC.
Minimum Purge Required : 8.70

Screened Interval : 50.22-60.22 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 57.72 ft BTOC
Total Purge Conducted : 16.2 Gal

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>X</u>	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO X YES _____ Well Number : _____
MS/MSD Sample: NO X YES _____ Well Number : _____
Rinsate Blank: NO X YES _____ Well Number : _____
Field Blank: NO X YES _____ Well Number : _____

Sample Crew (Print): M. Nestor
D. Dexter

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200	X	12.77	.116	16.07	6.65	134.5	0.2	6 th to Final Field Parameter
1200	X	12.96	.117	16.03	5.64	138.7	0.2	5 th to Final Field Parameter
1200	X	13.01	.115	9.98	5.63	142.5	0.1	4 th to Final Field Parameters
1200	X	12.88	.119	10.03	5.63	145.7	0.1	3 rd to Final Field Parameters
1200	X	13.04	.116	10.00	5.63	148.0	0.1	2 nd to Final Field Parameters
1200	16.2	13.05	.118	9.97	5.62	150.2	0.2	Final Sampling Parameters

Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11354 Calibration Date: 12/15/97 Initials: MM
 YSI SN: 11263 Calibration Date: 12/15/97 Initials: MM

Field measurement protocols followed with no exceptions (Y / N*) Form completed by: MS Date: 12/15/97

*Field Deviations Made: None



28 12/19/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EAST BLIARWOOD Well Number: 00MW0531
Arrival Date/Sample Time: 12/12/97 / 0945
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>200 11372</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u> </u>	

Weather : cloudy, cool Temps IN 40's

Well Total Depth : 55.38 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 48.90 ft BTOC.
Minimum Purge Required : 17.4 GAL

(10')
Screened Interval : 45.38 - 55.38 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 50' ft BTOC
Total Purge Conducted : 20 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ✓ YES Well Number :
MS/MSD Sample: NO ✓ YES Well Number :
Rinsate Blank: NO ✓ YES Well Number :
Field Blank: NO ✓ YES Well Number :

Sample Crew (Print): Doug Coppi
FRANK LEBLANC

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (g/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
	X	12.43	0.205	5.88	5.33	314.2	2.4	6 th to Final Field Parameter
	X	13.01	0.202	5.82	5.33	318.5	0.7	5 th to Final Field Parameter
	X	13.47	0.204	6.11	5.33	321.9	0.6	4 th to Final Field Parameters
	X	13.58	0.203	6.34	5.33	325.5	0.6	3 rd to Final Field Parameters
	X	13.56	0.204	6.60	5.34	328.1	0.4	2 nd to Final Field Parameters
20		13.63	0.203	6.77	5.34	330.0	0.4	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: IDOVA SN: 11354 Calibration Date: 12/12/97 Initials: DC

YSI SN: 1171 Calibration Date: 12/12/97 Initials: DC

Field measurement protocols followed with no exceptions (Y / N*) Form completed by: [Signature] Date: 12/12/97

*Field Deviations Made :

EP 12/19/97

106300K 35K78410 F1-0007



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Briarwood Well Number: 00 @ 12h21an
HAMW0537
Arrival Date/Sample Time: 12/12/97 | 13:20
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11035</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Cloudy 35°

Well Total Depth : 81.0 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 58.02 ft BTOC.
Minimum Purge Required : 8.7 gal/min

Screened Interval : 76.0-81.0 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 78.5 ft BTOC
Total Purge Conducted : 15 gal/min

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<u>n/a</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number : n/a
MS/MSD Sample: NO ☒ YES ☐ Well Number : n/a
Rinsate Blank: NO ☒ YES ☐ Well Number : n/a
Field Blank: NO ☒ YES ☐ Well Number : n/a

Sample Crew (Print): Aaron Silva n/a
Brian Gibson n/a

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200	X	12.78	0.223	11.55	5.11	338.7	1.0	6 th to Final Field Parameter
	X	13.62	0.224	11.03	5.08	344.0	0.3	5 th to Final Field Parameter
	X	13.82	0.224	10.86	5.07	350.1	0.1	4 th to Final Field Parameters
	X	13.93	0.222	10.63	5.05	355.9	0.1	3 rd to Final Field Parameters
	X	13.96	0.224	10.49	5.04	361.0	0.1	2 nd to Final Field Parameters
15	15	13.96	0.224	10.47	5.03	365.1	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11356 Calibration Date: 12/12/97 Initials: AS

YSI SN: 11264 Calibration Date: 12/12/97 Initials: AS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Ram L. L. L. Date: 12/12/97

*Field Deviations Made:

a / a

EP 12/19/97



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : Easton Branch Well Number: CGMW0539A

Arrival Date/Sample Time: 1116 / 1220

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11165</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used _____	

Weather : Cool, sunny, light breeze

Well Total Depth : 108.25 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 31.14 ft BTOC.

Minimum Purge Required : 8.70

Screened Interval : 103.25-108.25 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 105.75 ft BTOC

Total Purge Conducted : 14.6

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>X</u>	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO X, YES _____ Well Number: _____

MS/MSD Sample: NO X, YES _____ Well Number: _____

Rinsate Blank: NO X, YES _____ Well Number: _____

Field Blank: NO X, YES _____ Well Number: _____

Sample Crew (Print): M. Nestor

D. Dexter

Final Well Pumplog - Field Water Quality Measurement Table

Conc Unit	Total Conc (ppb)	Temp (°C)	Sp. Cond, (mS/cm)	DOC (mg/L)	pH	ORP (mV)	Turbidity (NTU)	Field Parameters
ppb	Σ	Units: 0.1 °C	Units: 0.01 mS/cm	Units: 0.1 mg/L	Units: 0.01	Units: mV	Units: 0.1 NTU	
12°C	Σ	16.76	0.26	4.62	5.41	141.3	0.3	6 th to Final Field Parameter
12°C	Σ	16.54	0.26	4.54	5.40	126.7	0.5	5 th to Final Field Parameter
12°C	Σ	16.47	0.26	4.57	5.29	133.3	0.5	4 th to Final Field Parameter
12°C	Σ	16.5	0.26	4.25	5.46	138.9	0.4	3 rd to Final Field Parameter
12°C	Σ	16.54	0.24	4.25	5.46	144.8	0.4	2 nd to Final Field Parameter
12°C	14.6	16.62	0.24	4.26	5.41	146.4	0.3	Final Sampling Parameter

Final Turbidity > 10 NTU, stabilization parameters = 1 NTU, Dissolved Oxygen < 2 mg/L, stabilization parameters = 0.2 mg/L.

Field Equipment: HYDROVA 24 11354 Calibration Date: 12/15/97 Initials: MA
 YTD 34 11263 Calibration Date: 12/15/97 Initials: MA

Field measurement protocols followed with no exceptions (Y/N) Form completed by: MSH Date: 12/15/97

Field Deviations Made: None



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GROUNDWATER SAMPLING FIELD DATA FORM

JEG/MMR - Groundwater Monitoring Program / 35Q850-01

SD-5 North Treatment System

Well Number (Loc ID): 00MW0542C Logbook Number: AFC-J23-35Q85001-F1-0003

Sample Date/Sample Time: 12/1/97 1 12:15

Sampling Method: Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11038</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather: Rain 35°

Well Total Depth: 19.80 ft BTOC.

Screened Interval: 14.80-19.80 ft BTOC.

Background PID Reading: 0.0 PPM.

Well PID Reading: 0.1 PPM.

Static Water Level: 3.85 ft BTOC.

Pump Set Depth: 17.0 ft BTOC

Minimum Purge Required: 8.7 gallons

Total Purge Conducted: 35 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.1	HCL to pH < 2
<input type="checkbox"/> n/a	EDB	E504	None
<input type="checkbox"/> n/a	TSS	E160.2	None
<input type="checkbox"/> n/a	Metals (Unfiltered)	ILM 04.0	HNO ₃
<input type="checkbox"/> n/a	Fe (TPTZ and Ferrous)	Hach Kit (Field Analysis)	N/A

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number: N/A
MS/MSD Sample: NO ☒ YES ☐ Well Number: N/A
Rinsate Blank: NO ☒ YES ☐ Well Number: A
Field Blank: NO ☒ YES ☐ Well Number: A

Sample Crew (Print): Aaron Silva —

Mike Nestor —

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200 ml/min	X	12-36	0.178	8.81	4.70	360.6	0.1	6 th to Final Field Parameter
	X	12.59	0.175	8.62	4.88	356.7	-0.1	5 th to Final Field Parameter
	X	12.55	0.174	8.42	4.88	362.9	1.3	4 th to Final Field Parameters
	X	12.50	0.174	8.20	4.88	368.3	3.7	3 rd to Final Field Parameters
	X	12.44	0.174	8.06	4.87	373.9	-0.1	2 nd to Final Field Parameters
35		12.49	0.174	7.79	4.93	374.8	0.0	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = \pm 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = \pm 0.2 mg/L.

Hach Analysis Conducted ☒ (NO); n/a (YES) - TPTZ Iron Reagent n/a; Ferrons Iron Reagent n/a.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/1/97 Initials: AS

YSI SN: 11264 Calibration Date: 12/1/97 Initials: AS

Field measurement protocols followed with no exceptions ☒ (N*) Form completed by: _____ Date: _____

*Field Deviations Made: n/a

Comments: Anomalous Turbidity values - Negative turbidity disregarded due to calibration drift, 3.7 NTU reading due to anomaly. Stabilization achieved thru general trend of Turbidity and other stabilization parameters of 12/2/97.



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Groundwater Monitoring Program / 35K784-10

Plume Area : Eastern Aqueduct Well Number: 00mw0543
Arrival Date/Sample Time: 12/1/07 / 13:40
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11034</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u>N/A</u>	

Weather: Freezing rain 32°

Well Total Depth : 33.88 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 11.0 ft BTOC.
Minimum Purge Required : 8.7 gal

Screened Interval : 28.88 - 33.88 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 31.88 ft BTOC
Total Purge Conducted : 17.9 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
/	VOCs	OLC 02.0	HCL to pH < 2
NA	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ☒ YES ☐ Well Number : _____

 MS/MISD Sample: NO ☒ YES ☐ Well Number : _____

 Runrate Blank: NO ☒ YES ☐ Well Number : _____

 Field Blank: NO ☒ YES ☐ Well Number : _____

N/A

Sample Crew (Print): Arvin Silva _____
Mike Nestor _____

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
1200 ml/min	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
	X	11.84	0.097	9.81	5.50	385.2	0.2	6 th to Final Field Parameter
	X	11.91	0.098	9.30	5.48	389.1	0.1	5 th to Final Field Parameter
	X	11.94	0.097	9.00	5.46	392.4	0.1	4 th to Final Field Parameters
	X	11.92	0.097	8.80	5.44	395.1	0.1	3 rd to Final Field Parameters
	X	11.94	0.096	8.56	5.43	397.4	0.2	2 nd to Final Field Parameters
	17	11.94	0.099	8.38	5.42	399.4	0.2	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU, Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/1/97 Initials: AS

YSI SN: 11264 Calibration Date: 12/1/97 Initials: BS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Andrea Silva Date: 12/1/97

*Field Deviations Made: N/A



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : E. Braintree / W. Aquafarm Well Number: 00MW0544C
Arrival Date/Sample Time: 12/3/97 | 9:50
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11034</u>	Pump Length <u>100</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Sunny 40°

Well Total Depth : 21.73 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 5.21 ft BTOC.
Minimum Purge Required : 8.70 gallons

Screened Interval : 16.73-21.73 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 19 ft BTOC
Total Purge Conducted : 15 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<input checked="" type="checkbox"/>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number _____
MS/MSD Sample: NO ☒ YES ☐ Well Number _____
Rinsate Blank: NO ☒ YES ☐ Well Number _____
Field Blank: NO ☒ YES ☐ Well Number _____

Sample Crew (Print):

Aaron Silva

M. K. Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate ($\frac{\text{gal}}{\text{min}}$)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200 $\frac{\text{ml}}{\text{min}}$		10.55	0.058	6.67	5.23	367.8	1.5	6 th to Final Field Parameter
1	X	10.72	0.059	6.26	5.08	365.4	0.5	5 th to Final Field Parameter
1	X	10.78	0.059	6.15	5.00	368.6	0.3	4 th to Final Field Parameters
1	X	10.81	0.059	6.08	4.94	372.8	0.2	3 rd to Final Field Parameters
1	X	10.70	0.058	6.03	4.93	375.7	0.2	2 nd to Final Field Parameters
1	15	10.84	0.059	5.99	4.94	377.1	0.2	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11354 Calibration Date: 12/3/97 Initials: AS

YSI SN: 11261 Calibration Date: 12/3/97 Initials: AS

Field measurement protocols followed with no exceptions (Y / N*) Form completed by: Sam L. L. L. Date: 12/3/97

*Field Deviations Made:

N/A

EP 12/9/97



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Briarwood / W. Aqueduct Well Number: 00MW0544D

Arrival Date/Sample Time: 12/3/97 / 10:50

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Sunny 40°

Well Total Depth : 13.0 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 5.32 ft BTOC.

Minimum Purge Required : 8.70 gallons

Screened Interval : 8.0 - 13.0 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 10.5 ft BTOC

Total Purge Conducted : 17 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>✓</u>	VOCs	OLC 02.0	HCL to pH < 2
<u>n/a</u>	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate NO ✓ YES Well Number : n/a
MS/MSD Sample: NO ✓ YES Well Number : n/a
Rinse Blank: NO YES ✓ Well Number : 00MW0544D
Field Blank: NO ✓ YES Well Number : n/a

Sample Crew (Print): Aaron Silva

Mike Nester

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (°C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Param. (± 0.5°)	Stab. Param. (± 3%)	Stab. Param. (± 10%)	Stab. Param. (± 0.1)	Not Applicable	Stab. Param. (± 10%)	
1200	X	10.30	0.081	3.00	4.84	338.5	4.4	6 th to Final Field Parameter
	X	10.34	0.080	2.93	4.82	335.7	2.3	5 th to Final Field Parameter
	X	10.48	0.078	2.97	4.80	334.2	1644.9	4 th to Final Field Parameters
	X	10.42	0.076	3.50	4.73	336.3	1.1	3 rd to Final Field Parameters
	X	10.46	0.076	3.47	4.74	335.2	1.2	2 nd to Final Field Parameters
	17	10.51	0.076	3.44	4.73	335.8	0.9	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU, Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11354 Calibration Date: 12/3/97 Initials: AS

YSI SN: 11261 Calibration Date: 12/3/97 Initials: AS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Ann L. Lil Date: 12/3/97

*Field Deviations Made : N/A



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EAST BRIARWOOD Well Number: 00 MWDS61
Arrival Date/Sample Time: 12/12/97 / 1250
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u> </u>	

Weather : CLOUDY, TEMPS in 40'S, COOL

Well Total Depth : 55.83 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 6.95 ft BTOC.
Minimum Purge Required : 8.71 GAL

(5')
Screened Interval : 50.83 - 55.83 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 53' ft BTOC
Total Purge Conducted : 18 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDS	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ✓ YES Well Number :
 MS/MSD Sample: NO ✓ YES Well Number :
 Rinsate Blank: NO ✓ YES Well Number :
 Field Blank: NO ✓ YES Well Number :

Sample Crew (Print): DAUG COPP
FRANK LEBLANC

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gpm/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200	X	11.36	0.145	10.40	5.38	320.3	2.6	6 th to Final Field Parameter
	X	11.45	0.145	10.22	5.38	321.7	0.7	5 th to Final Field Parameter
	X	11.51	0.145	8.68	5.39	323.6	0.7	4 th to Final Field Parameters
	X	11.55	0.144	8.78	5.38	325.6	0.2	3 rd to Final Field Parameters
	X	11.56	0.145	9.14	5.38	327.5	0.2	2 nd to Final Field Parameters
↓	18	11.57	0.145	9.53	5.38	329.0	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDOVA SN: 11354 Calibration Date: 12/12/97 Initials: D.C.

YSI SN: 11171 Calibration Date: 12/12/97 Initials: D.C.

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Randy P. Gys Date: 12/12/97

*Field Deviations Made:

SEP 12/19/97

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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EAST BRIARWOOD Well Number: 00MW0562A
Arrival Date/Sample Time: 12/12/97 / 1125
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11165</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u> </u>	

Weather : cloudy, cool temps in 40's

Well Total Depth : 135.78 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 9.60 ft BTOC.
Minimum Purge Required : 871 GAL

(5')
Screened Interval : 130.78-135.78 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 133' ft BTOC
Total Purge Conducted : 20 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number:
MS/MSD Sample: NO ☐ YES ☒ Well Number: 00MW0562A
Rinsate Blank: NO ☒ YES ☐ Well Number:
Field Blank: NO ☒ YES ☐ Well Number:

Sample Crew (Print):

Doug Corpi

FRANK LEBLANC

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (g/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. (± 3%)	Stab. Para. (± 3%)	Stab. Para. (± 10%)	Stab. Para. (± 0.11)	Not Applicable	Stab. Para. (± 10%)	
1200	X	12.15	0.135	12.08	6.12	299.5	6.8	6 th to Final Field Parameter
	X	12.35	0.134	10.62	6.11	301.7	6.2	5 th to Final Field Parameter
	X	12.43	0.134	10.36	6.11	303.7	3.3	4 th to Final Field Parameters
	X	12.54	0.134	10.63	6.11	304.2	2.2	3 rd to Final Field Parameters
	X	12.58	0.134	10.44	6.11	305.0	1.8	2 nd to Final Field Parameters
20		12.60	0.134	10.32	6.11	306.0	1.6	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PROVA SN: 11354 Calibration Date: 12/12/97 Initials: D.C

YSI SN: 11171 Calibration Date: 12/12/97 Initials: D.C

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: David P. Gray Date: 12/12/97

*Field Deviations Made: NONE

CP 12/19/97

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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Briarwood / W. Aqueduct Well Number: AFC-J23- 00 MW0567
Arrival Date/Sample Time: 11/25/97 1 10:45
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>N/A</u>	

Weather : Sunny 35°

Well Total Depth : 67.54 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 57.67 ft BTOC.
Minimum Purge Required : 8.71 gallons

Screened Interval : 62.54-67.54 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 65 ft BTOC
Total Purge Conducted : 16.14 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<input type="checkbox"/>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number: N/A
MS/MSD Sample: NO ☒ YES ☐ Well Number: N/A
Rinsate Blank: NO ☒ YES ☐ Well Number: N/A
Field Blank: NO ☒ YES ☐ Well Number: N/A

Sample Crew (Print): Aaron Silva _____
M. Lee Hester _____

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
220 ml/min	X	Stab. Para. (± 0.1)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
	X	13.17	0.082	9.66	5.21	255.9	0.1	6 th to Final Field Parameter
	X	13.18	0.082	9.51	5.18	271.2	0.0	5 th to Final Field Parameter
	X	13.48	0.081	9.38	5.16	281.5	0.0	4 th to Final Field Parameters
	X	13.46	0.081	9.31	5.17	287.6	0.0	3 rd to Final Field Parameters
	X	13.44	0.082	9.28	5.12	294.1	0.0	2 nd to Final Field Parameters
16.14		13.50	0.081	9.24	5.14	296.4	0.0	Final Sampling Parameters

Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11355 Calibration Date: 11/25/97 Initials: AS

YSI SN: 11047 Calibration Date: 11/25/97 Initials: AS

Field measurement protocols followed with no exceptions (V) N*) Form completed by: [Signature] Date: 11/25/97

*Field Deviations Made: N/A



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Branch / W. Aqueduct Well Number: 00MW0569
Arrival Date/Sample Time: 11/25/97 1 12:25
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11035</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>N/A</u>	

Weather : Sunny 35°

Well Total Depth : 32.0 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 14.34 ft BTOC.
Minimum Purge Required : 8.71 gallons

Screened Interval : 27.0-32.0 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 29.5 ft BTOC
Total Purge Conducted : 19.04 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<input type="checkbox"/>	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ☒ YES ☐ Well Number :
 MS, MSD Sample: NO ☐ YES ☐ Well Number :
 Rinsate Blank: NO ☐ YES ☒ Well Number : 00MW0569
 Field Blank: NO ☒ YES ☐ Well Number :

Sample Crew (Print):

Aaron Silva
Mike Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
200 ml/min	X	11.28	0.104	9.49	5.11	277.1	1.5	6 th to Final Field Parameter
	X	11.46	0.103	9.32	5.08	289.6	0.9	5 th to Final Field Parameter
	X	11.44	0.104	9.24	5.05	297.7	0.6	4 th to Final Field Parameters
	X	11.46	0.103	9.17	5.05	303.3	0.3	3 rd to Final Field Parameters
	X	11.46	0.105	9.14	5.04	306.8	0.2	2 nd to Final Field Parameters
	19.04	11.38	0.103	9.10	5.04	309.7	0.2	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11355 Calibration Date: 11/25/97 Initials: AS
 YSI SN: 11047 Calibration Date: 11/25/97 Initials: AS

Field measurement protocols followed with no exceptions (P / N*) Form completed by: Sam L. L. Date: 11/25/97

*Field Deviations Made: N/A



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Prunard / W. Aquifer Well Number: 00MW0570A

Arrival Date/Sample Time: 11/24/97 | 10:40

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11035</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Cloudy Wind 15mph freezing rain 35°

Well Total Depth : 80.0 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 19.77 ft BTOC.

Minimum Purge Required : 8.7 gallons

Screened Interval : 75.0 - 80.0 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 77.5 ft BTOC

Total Purge Conducted : 25 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>3</u>	VOCs	OLC 02.0	HCL to pH < 2
<u>—</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ✓ YES — Well Number : N/A
MS/MSD Sample: NO ✓ YES — Well Number : N/A
Rinsate Blank: NO ✓ YES — Well Number : N/A
Field Blank: NO ✓ YES — Well Number : N/A

Sample Crew (Print): Aaron Silva —

Mike Nestor —

Final Well Purging - Field Water Quality Measurement Table

Purge Rate <i>(gpm)</i>	Total Purge (gal)	Temp (C) <small>Slab, Para. (± 3%)</small>	Sp. Cond. (mS/cm) <small>Slab, Para. (± 3%)</small>	DO* (mg/L) <small>Slab, Para. (± 10%)</small>	pH <small>Slab, Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Slab, Para. (± 10%)</small>	Field Parameters
<i>1200.1/min</i>	X	<i>12.04</i>	<i>0.104</i>	<i>9.85</i>	<i>5.14</i>	<i>226.3</i>	<i>-1.0</i>	6 th to Final Field Parameter
	X	<i>12.16</i>	<i>0.105</i>	<i>9.03</i>	<i>5.19</i>	<i>234.2</i>	<i>-1.1</i>	5 th to Final Field Parameter
	X	<i>12.11</i>	<i>0.105</i>	<i>8.90</i>	<i>5.17</i>	<i>242.3</i>	<i>-1.0</i>	4 th to Final Field Parameters
	X	<i>12.17</i>	<i>0.105</i>	<i>8.93</i>	<i>5.17</i>	<i>248.1</i>	<i>-1.1</i>	3 rd to Final Field Parameters
	X	<i>12.10</i>	<i>0.105</i>	<i>9.06</i>	<i>5.16</i>	<i>253.5</i>	<i>-1.2</i>	2 nd to Final Field Parameters
<i>25</i>		<i>12.22</i>	<i>0.105</i>	<i>8.81</i>	<i>5.16</i>	<i>257.8</i>	<i>-1.3</i>	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11355 Calibration Date: 11/24/97 Initials: AB

YSI SN: 11263 Calibration Date: 11/24/97 Initials: AS

Field measurement protocols followed with no exceptions (Y / N*) Form completed by: *Don L. Loh* Date: 11/24/97

*Field Deviations Made :

Comments: Turbidity stabilized slightly negative

X Silicious odor when purging ES 11/24/97



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : E. Brimard / W. Agoston Well Number: 00MW0570B
Arrival Date/Sample Time: 11/24/97 | 11:45
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>N/A</u>	

Weather : Cloudy light wind 35°

Well Total Depth : 35.06 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 19.62 ft BTOC.
Minimum Purge Required : 8.7 gal/min

Screened Interval : 30.06-35.06 ft BTOC.
Well PID Reading : 31.0 PPM.
Pump Set Depth : 32.5 ft BTOC
Total Purge Conducted : 20 gal/min

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>3</u>	VOCs	OLC 02.0	HCL to pH < 2
<u>—</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number : N/A
MS MSD Sample: NO ☒ YES ☐ Well Number : N/A
Rinsate Blank: NO ☒ YES ☐ Well Number : A
Field Blank: NO ☒ YES ☐ Well Number : —

Sample Crew (Print):

Aaron Silva
Mike Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C) <small>Sub. Para. (± 3%)</small>	Sp. Cond. (mS/cm) <small>Sub. Para. (± 3%)</small>	DO* (mg/L) <small>Sub. Para. (± 10%)</small>	pH <small>Sub. Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Sub. Para. (± 10%)</small>	Field Parameters
1200 gal/min	X	11.92	0.159	5.74	4.99	280.4	8.3	6 th to Final Field Parameter
	X	11.97	0.159	3.66	4.98	282.5	2.9	5 th to Final Field Parameter
	X	11.98	0.159	3.27	4.97	285.1	0.8	4 th to Final Field Parameters
	X	11.96	0.159	3.23	4.96	287.7	0.0	3 rd to Final Field Parameters
	X	11.98	0.160	3.16	4.96	289.8	-0.4	2 nd to Final Field Parameters
20		12.05	0.160	3.11	4.96	291.9	-0.8	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11355 Calibration Date: 11/24/97 Initials: AS

YSI SN: 11263 Calibration Date: 11/24/97 Initials: AS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Sam L. L... Date: 11/24/97

*Field Deviations Made :

Comments: Negative Stability of Turbidity consistent w/ 1st well

✓ EP 11/24/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : WALEB Well Number: COMP0571A

Arrival Date/Sample Time: 12-5-97 / 1215

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>N/A</u>	Pump Length <u>N/A</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>N/A</u>	

PARASITIC PUMP #11495

Weather : Cloudy ; Cool, Slight Rain, Temps in mid
40's, 10-15 mph NE winds

Well Total Depth : 53.0 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 16.25 ft BTOC.

Minimum Purge Required : 1.7 gallons

Screened Interval : 50.5-53.0 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : N/A ft BTOC

Total Purge Conducted : 7.0 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>X</u>	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO X YES Well Number :

MIS/MSD Sample: NO X YES Well Number :

Runate Blank: NO X YES Well Number :

Field Blank: NO X YES Well Number :

Sample Crew (Print):

Anne Robinson (FTL)

Brian Gibson

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
		Stab. Para. (± 3/4)	Stab. Para. (± 3%)	Stab. Para. (± 10%)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. (± 10%)	
8.00	X	11.73	0.102	9.03	5.68	180.3	263.3	6 th to Final Field Parameter
	X	11.73	0.103	9.17	5.65	187.7	1085.5	5 th to Final Field Parameter
	X	11.77	0.103	9.20	5.64	192.2	1250.5	4 th to Final Field Parameters
	X	11.76	0.103	9.18	5.63	196.5	1585.6	3 rd to Final Field Parameters
	X	11.75	0.102	9.14	5.62	202.2	190.4	2 nd to Final Field Parameters
8.00	7.0 gal	11.74	0.103	9.10	5.63	205.3	761.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDJOVA SN: 11354 Calibration Date: 12-5-97 Initials: AR
YSI SN: 11045 Calibration Date: 12-5-97 Initials: AR

Field measurement protocols followed with no exceptions (Y N*) Form completed by: Anne Robinson Date: 12-5-97

*Field Deviations Made: NOTE: Stability is not used to take a sample when

using the peristaltic pump. A three well

volume purge or six readings (which ever one
is the deciding factor) is used to take a
sample.



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : Western Aqua Sam Well Number: 39MW0002

Arrival Date/Sample Time: 12/9/97 / 1050

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u> </u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u> </u>	

Weather : Sunny, cool. Light breeze

Well Total Depth : 59.32 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 45.46 ft BTOC.

Minimum Purge Required : 17.4

Screened Interval : 49.32-59.32 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 54.32 ft BTOC

Total Purge Conducted : 17.8

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>X</u>	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO X YES Well Number :
MS/MSD Sample: NO X YES Well Number :
Rinsate Blank: NO YES X Well Number : 39MW0002
Field Blank: NO X YES Well Number :

Sample Crew (Print): M. Aester

T. Radolakis

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
		Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200	X	12.85	.198	0.56	6.49	-73.8	0.8	6 th to Final Field Parameter
1200	X	12.88	.196	0.38	6.50	-77.2	0.9	5 th to Final Field Parameter
1200	X	12.83	.196	0.02	6.50	-80.1	0.8	4 th to Final Field Parameters
1200	X	12.79	.197	-0.10	6.50	-82.0	0.9	3 rd to Final Field Parameters
1200	X	12.73	.196	-0.12	6.51	-84.0	0.8	2 nd to Final Field Parameters
1200	17.8	12.69	.194	-0.33	6.52	-86.2	0.7	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/9/97 Initials: MM
 YSI SN: 11171 Calibration Date: 12/9/97 Initials: MM

Field measurement protocols followed with no exceptions (Y / N) Form completed by: mg/est Date: 12/9/97

*Field Deviations Made: DO values out of range. Stability based upon remaining parameters. ✓

NEGATIVE DO values, low DO consistent with this well, negative values

indicate probe not functioning properly - EP 12/10/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : Western Aquifer Well Number: 39MW0004
Arrival Date/Sample Time: 12/9/97 / 0855
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11370</u>	Pump Length <u>275'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used _____	

Weather : Sunny, cool Light breeze

Well Total Depth : 47.64 ft BTOC. Screened Interval : 42.64 - 47.64 ft BTOC.
Background PID Reading : 0.0 PPM. Well PID Reading : 50.0 PPM.
Static Water Level : 33.98 ft BTOC. Pump Set Depth : 45.00 ft BTOC.
Minimum Purge Required : 8.70 gal Total Purge Conducted : 16.2 gal

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
<input type="checkbox"/>	EDB	USEPA 504.1	None
<input type="checkbox"/>			
<input type="checkbox"/>			

QA/QC Sampling: Sample Duplicate: NO ☒ YES _____ Well Number : _____
MS/MSD Sample: NO ☒ YES _____ Well Number : _____
Rinsate Blank: NO ☒ YES _____ Well Number : _____
Field Blank: NO ☒ YES _____ Well Number : _____

Sample Crew (Print): M. Nester
T. Radolakis

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
		Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200	X	13.06	.215	4.64	5.92	208.7	0.2	6 th to Final Field Parameter
1200	X	13.09	.218	4.35	5.90	217.6	0.3	5 th to Final Field Parameter
1200	X	13.27	.220	4.12	5.90	223.2	0.6	4 th to Final Field Parameters
1200	X	13.26	.221	4.02	5.90	227.2	0.0	3 rd to Final Field Parameters
1200	X	13.36	.221	3.85	5.89	230.3	0.1	2 nd to Final Field Parameters
1200		13.34	.221	3.95	5.89	232.1	0.1	Final Sampling Parameters

Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/9/97 Initials: mw

YSI SN: 11171 Calibration Date: 12/9/97 Initials: mw

MSW
12/9/97

Field measurement protocols followed with no exceptions (V) Form completed by: mg/bs Date: 12/9/97

*Field Deviations Made: Exceeded minimal groundwater limit initially and then stabilized
within 0.3 feet during purge and sampling.

-EP 12/10/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : WESTERN AQUAFARM Well Number: 39MW0005A
Arrival Date/Sample Time: 12/9/97 / 1030
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11035</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u> </u>	

Weather : Sunny, VERY CLEAR, Temps IN 40'S

Well Total Depth : 66.78 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 46.35 ft BTOC.
Minimum Purge Required : 8.71 GAL

(5')
Screened Interval : 61.78-66.78 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 64' ft BTOC
Total Purge Conducted : 18 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number : _____
MS/MSD Sample: NO ☒ YES ☐ Well Number : _____
Rinsate Blank: NO ☒ YES ☐ Well Number : _____
Field Blank: NO ☒ YES ☐ Well Number : _____

Tip Blank YES 39MW0005A
Sample Crew (Print): DAVE DELMARCO

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gpm)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Sub. Para. ($\pm 3\%$)	Sub. Para. ($\pm 3\%$)	Sub. Para. ($\pm 10\%$)	Sub. Para. (± 0.1)	Not Applicable	Sub. Para. ($\pm 10\%$)	
1200	X	12.95	0.175	4.74	6.77	-73.2	0.7	6 th to Final Field Parameter
	X	13.18	0.176	4.91	6.78	-78.4	0.5	5 th to Final Field Parameter
	X	13.06	0.177	5.27	6.79	-83.0	0.2	4 th to Final Field Parameters
	X	13.21	0.177	5.87	6.78	-85.4	0.1	3 rd to Final Field Parameters
	X	13.26	0.177	6.29	6.79	-89.3	0.1	2 nd to Final Field Parameters
✓	18	13.18	0.177	6.17	6.80	-92.1	0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDOVA SN: 11353 Calibration Date: 12/9/97 Initials: DC

YSI SN: 11048 Calibration Date: 12/9/97 Initials: DC

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Shang p Gy Date: 12/9/97

*Field Deviations Made: NONE

-EP 12/16/97

Comment: - ODOE FROM WELL (PURGE H2O)

109 RANK 35K 78410 FI-0007

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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area: WEST AQUAFARM Well Number: 28MW0020

Arrival Date/Sample Time: 12/10/97 1 23 ^{00 R1167} 1105

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u> </u>	

Weather: Sunny, slight overcast, cool temps in 40's

Well Total Depth : 80.18 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level: 58.15 ft BTOC.

Minimum Purge Required: 8.71 GAL

Screened Interval: 75.18 - 80.18 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 78' ft BTOC

Total Purge Conducted : 23 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ~~✓~~ YES ☒ Well Number: 28mwo02c

MS/MSD Sample: NO ☒ YES ☐ Well Number: _____

Raise Blank: NO ☒ YES ☐ Well Number: _____

Field Blank: NO ☒ : YES ☐ Well Number: _____

Trip BIANK YES well # 28 MW 02020

Sample Crew (Print): _____

Doug Coppi

FRANK LEBlanc

Final Well Purging - Field Water Quality Measurement Table

Purge Rate ($\frac{\text{gal}}{\text{min}}$)	Total Purge (gal)	Temp (C) <small>Stab. Para. (± 0.1)</small>	Sp. Cond. (mS/cm) <small>Stab. Para. ($\pm 3\%$)</small>	DO* (mg/L) <small>Stab. Para. ($\pm 10\%$)</small>	pH <small>Stab. Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Stab. Para. ($\pm 10\%$)</small>	Field Parameters
1200	X	13.43	0.138	20.60	6.64	-109.0	0.3	6 th to Final Field Parameter
	X	13.42	0.138	22.47	6.58	-83.7	0.4	5 th to Final Field Parameter
	X	13.18	0.139	-2.46	6.65	-56.3	0.3	4 th to Final Field Parameters
	X	12.92	0.140	-2.66	6.70	-79.0	-0.1	3 rd to Final Field Parameters
	X	13.06	0.140	-3.15	6.74	-88.2	1.0	2 nd to Final Field Parameters
V	23	13.04	0.140	-3.58	6.75	-93.7	-0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDOVA SN: 9273 Calibration Date: 12/10/97 Initials: D.C.

YSI SN: 11048, 11171 Calibration Date: 12/10/97 Initials: D.C.

D.C. 12/10/97

Field measurement protocols followed with no exceptions *(Signature)* Form completed by: *Randy P. Byr* Date: 12/10/97

*Field Deviations Made: DO + TURBIDITY OUT OF RANGE, STABILITY BASED ON ALL OTHER PARAMETERS

Stabilization achieved based on remaining 4 parameters, equipment manager notified - EP 12/10/97

COMMENTS: REFER TO COMMENT SECT. IN LOGBOOK 35K78410 F-1-0007 p. 83

... ADDX FROM ORDERED WATER



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : WEST AQUAFARM Well Number: 28MW0020A

Arrival Date/Sample Time: 12/10/97 1 1215

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11165</u>	Pump Length <u>200'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u> </u>	

Weather : COLD, temps in low 40's, BECOMING CLOUDY WITH 0-10 mph

Well Total Depth : 138.73 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 57.55 ft BTOC.

Minimum Purge Required : 8.71 GAL

(5')
Screened Interval : 133.73 - 138.73 ft BTOC.

Well PID Reading : 1.9 PPM.

Pump Set Depth : 136' ft BTOC

Total Purge Conducted : 18 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ✓ YES Well Number:

MS/MSD Sample: NO ✓ YES Well Number:

Rinsate Blank: NO ✓ YES Well Number:

Field Blank: NO ✓ YES Well Number:

TRIP BLANK YES WELL # 28MW0020A

Sample Crew (Print):

Doug Coppi

FRANK LEBLANC

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. (± 3%)	Stab. Para. (± 3%)	Stab. Para. (± 10%)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. (± 10%)	
1200	X	12.58	0.107	10.40	5.61	180.9	0.4	6 th to Final Field Parameter
	X	12.61	0.097	10.35	5.59	197.8	0.3	5 th to Final Field Parameter
	X	12.52	0.116	10.37	5.58	211.9	0.2	4 th to Final Field Parameters
	X	12.48	0.105	10.43	5.56	229.0	0.0	3 rd to Final Field Parameters
	X	12.61	0.104	10.03	5.56	240.4	0.2	2 nd to Final Field Parameters
↓	18	12.69	0.095	10.13	5.56	246.3	0.0	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: HANNA SN: 9273 Calibration Date: 12/10/97 Initials: D.C.
YSI SN: 1171 Calibration Date: 12/10/97 Initials: D.C.

Field measurement protocols followed with no exceptions (Y (N)) Form completed by: [Signature] Date: 12/10/97

*Field Deviations Made: SP. COND. OUT OF RANGE (STABLE), STABILITY BASED ON ALL OTHER PARAMETERS

Parameters were not trending but did not stabilize within 3% for specific conductivity,

window for stabilization very small. Stabilization achieved based on other parameters. 12/11/97

COMMENTS: ODOOR FROM PURGED WATER

REFER TO LOG BOOK 35K7840 F1-0007, COMMENT SECT. P.83 RELATING TO PAKA.



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : WEST AQUAFARM Well Number: 28MW0021
Arrival Date/Sample Time: 12/10/97 1 0940
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11034</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: <u> </u>	

Weather : Sunny, cool temps in 40's

Well Total Depth : 86.68 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 57.90 ft BTOC.
Minimum Purge Required : 8.71 GAL

(5')
Screened Interval : 81.68 - 86.68 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 84' ft BTOC
Total Purge Conducted : 15 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES Well Number:
MS/MSD Sample: NO ☒ YES Well Number:
Rinse Blank: NO ☒ YES Well Number:
Field Blank: NO ☒ YES Well Number:

TRIP BLANK YES Well # 28MW0021

Sample Crew (Print):

Doug Coppi

FRANK IEBANK

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (g/min)	Total Purge (gal)	Temp (C) <small>Stab. Para. ($\pm 3\%$)</small>	Sp. Cond. (mS/cm) <small>Stab. Para. ($\pm 3\%$)</small>	DO* (mg/L) <small>Stab. Para. ($\pm 10\%$)</small>	pH <small>Stab. Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Stab. Para. ($\pm 10\%$)</small>	Field Parameters
1200	X	12.57	0.331	11.52	6.53	-103.4	0.9	6 th to Final Field Parameter
	X	12.86	0.332	11.26	6.63	-119.4	0.8	5 th to Final Field Parameter
	X	12.91	0.333	11.15	6.67	-125.8	0.7	4 th to Final Field Parameters
	X	13.02	0.333	11.03	6.69	-129.2	0.5	3 rd to Final Field Parameters
	X	13.09	0.333	11.18	6.70	-131.0	0.4	2 nd to Final Field Parameters
✓ 15		13.19	0.333	11.03	6.72	-132.9	0.6	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDOVA SN: 9273 Calibration Date: 12/10/97 Initials: DC

YSI SN: 11048 Calibration Date: 12/10/97 Initials: DC

Field measurement protocols followed with no exceptions (Y/N) Form completed by: Harold P. Gipe Date: 12/10/97

*Field Deviations Made: NONE

COMMENT ODCR FROM PURGED WATER

106800K 3SKT8410 F1-0007



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EB/WA Well Number: MAMW0513A
Arrival Date/Sample Time: 12-5-97 / 1000
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11165</u>	Pump Length <u>200 ft.</u>
Grundfos Redi-Flo 2	Dedicated Pump Used _____	

Weather : Cloudy & Cool, Slight Rain, Temps in mid 40s,
10-15mph NE winds

Well Total Depth : 77.4 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 46.81 ft BTOC.
Minimum Purge Required : 8.7 gallons

Screened Interval : 72.4-77.4 ft BTOC.
Well PID Reading : 2.1 PPM.
Pump Set Depth : 74.9 ft BTOC
Total Purge Conducted : 25 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<input checked="" type="checkbox"/>	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ☐ YES ☒ Well Number : MAMW0513A
MS/MSD Sample: NO ☒ YES ☐ Well Number : _____
Rinsate Blank: NO ☒ YES ☐ Well Number : _____
Field Blank: NO ☒ YES ☐ Well Number : _____

Sample Crew (Print): Anne Robinson (FTL)
Brian Gibson (FT)

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
12.00	X	13.00	0.052	9.50	5.29	Not Applicable	0.3	6 th to Final Field Parameter
	X	13.25	0.052	9.34	5.33	167.4	0.2	5 th to Final Field Parameter
	X	13.37	0.052	9.24	5.34	164.1	0.2	4 th to Final Field Parameters
	X	13.45	0.052	9.23	5.33	152.9	0.1	3 rd to Final Field Parameters
	X	13.47	0.052	9.25	5.32	148.1	0.1	2 nd to Final Field Parameters
12.00	25	13.51	0.052	9.28	5.31	147.3	0.1	Final Sampling Parameters

Note: Turbidity < 10 NTU's stabilization parameters = \pm 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = \pm 0.2 mg/L.

Field Equipment: PID/pVA SN: 11354 Calibration Date: 12-5-97 Initials: AR

YSI SN: 11045 Calibration Date: 12-5-97 Initials: AR

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Anne Perkins Date: 12-5-97

*Field Deviations Made: NONE

Note: The H₂O from this well had a strong fuel odor to it.

-SP 12/5/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : EBriarwood/W. Ag. Farm Well Number: MAMW0514C
Arrival Date/Sample Time: 12/5/97 / 9:50
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11035</u>	Pump Length <u>100</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u>n/a</u>	

Weather : Drizzle 45°

Well Total Depth : 82.36 ft BTOC. Screened Interval : 77.36-82.36 ft BTOC.
Background PID Reading : 0.0 PPM. Well PID Reading : 0.0 PPM.
Static Water Level : 35.34 ft BTOC. Pump Set Depth : 80 ft BTOC
Minimum Purge Required : 8.7 gallons Total Purge Conducted : 15 gallons

Analytical Parameters

Collected	Parameters	Method	Preservatives
<u>✓</u>	VOCs	OLC 02.0	HCL to pH < 2
<u>n/a</u>	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ✓ YES Well Number: N/A
MS/MSD Sample: NO ✓ YES Well Number: N/A
Rinsate Blank: NO ✓ YES Well Number: MAMW0514C
Field Blank: NO ✓ YES Well Number: n/a

Sample Crew (Print):

Aaron Silva

Mike Nestor

N/A

A

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C) <small>Stab. Para. ($\pm 3\%$)</small>	Sp. Cond. (mS/cm) <small>Stab. Para. ($\pm 3\%$)</small>	DO* (mg/L) <small>Stab. Para. ($\pm 10\%$)</small>	pH <small>Stab. Para. (± 0.1)</small>	ORP (mV) <small>Not Applicable</small>	Turbidity (NTUs) <small>Stab. Para. ($\pm 10\%$)</small>	Field Parameters
120	X	12.10	0.093	11.89	5.32	372.9	1.4	6 th to Final Field Parameter
	X	12.38	0.094	11.79	5.25	369.4	-0.1	5 th to Final Field Parameter
	X	12.38	0.095	11.62	5.19	375.4	-0.2	4 th to Final Field Parameters
	X	12.36	0.094	11.46	5.18	380.9	-0.1	3 rd to Final Field Parameters
	X	12.44	0.095	11.45	5.17	385.8	0.2	2 nd to Final Field Parameters
15		12.44	0.094	11.43	5.17	389.8	-0.1	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 09273 Calibration Date: 12/5/97 Initials: AS

YSI SN: 11264 Calibration Date: 12/5/97 Initials: AS

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Don R. Smith Date: 12/5/97

*Field Deviations Made : W / A

EP 12/9/97



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GROUNDWATER SAMPLING FIELD DATA FORM

Groundwater Monitoring Program / 35K784-10

Plume Area : WEST AQUAFARM Well Number: 00MW0527

Arrival Date/Sample Time: 12/11/97 / 1315

Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11369</u>	Pump Length <u>100'</u>
Grundfos Redi-Flo 2	Dedicated Pump Used <u> </u>	

Weather : WINDY 10-15 MPH, TEMPS IN 40'S, CLOUDY

Well Total Depth : 55.43 ft BTOC.

Background PID Reading : 0.0 PPM.

Static Water Level : 7.62 ft BTOC.

Minimum Purge Required : 8.71 GAL

(5')
Screened Interval : 50.43 - 55.43 ft BTOC.

Well PID Reading : 0.0 PPM.

Pump Set Depth : 53' ft BTOC

Total Purge Conducted : 15 GAL

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES ☐ Well Number: _____
MS MSD Sample: NO ☒ YES ☐ Well Number: _____
Rinsate Blank: NO ☒ YES ☐ Well Number: _____
Field Blank: NO ☒ YES ☐ Well Number: _____

Sample Crew (Print):

Doug Coppi

FRANK LEBLANC

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gpm)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. (± 0.1)	Stab. Para. (± 0.1)	Stab. Para. (± 0.1)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. (± 10%)	
1200	X	10.94	0.112	10.21	5.40	259.0	-0.5	6 th to Final Field Parameter
	X	11.07	0.112	10.11	5.35	263.7	-0.6	5 th to Final Field Parameter
	X	11.00	0.111	10.22	5.34	267.1	-0.7	4 th to Final Field Parameters
	X	11.06	0.111	10.31	5.33	270.4	-0.7	3 rd to Final Field Parameters
	X	11.06	0.112	10.33	5.33	272.8	-0.8	2 nd to Final Field Parameters
✓ 15		11.10	0.112	10.31	5.33	274.5	-0.8	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PIDOVA SN: 11353 Calibration Date: 12/11/97 Initials: DC

YSI SN: 11046 Calibration Date: 12/11/97 Initials: DC

Field measurement protocols followed with no exceptions (V/N*) Form completed by: Raouf P. Gpn Date: 12/11/97

*Field Deviations Made: Turbidity (-) values, out of stable range, stability based on

ALL OTHER PARAMETERS

- EP 12/12/97

COMMENT: 106 BOX 351-7840 F1-0007, REFER TO COMMENT SEC. p. 94



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : SD-5 Well Number: 28MW0513
Arrival Date/Sample Time: 12-11-97 / 1440
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11037</u>	Pump Length <u>200</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: _____	

Weather : Light SNOW, COLD, Temp in 30°'s

Well Total Depth : 98.04 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 56.72 ft BTOC.
Minimum Purge Required : 8.11

Screened Interval : 98.04 - 93.04 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 95.5 ft BTOC
Total Purge Conducted : 24.2

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	CSEPA 504.1	None

QA/QC Sampling: Sample Duplicate: NO ☒ YES _____ Well Number: _____
MS/MSD Sample: NO ☒ YES _____ Well Number: _____
Rinsate Blank: NO ☒ YES _____ Well Number: 28MW0513
Field Blank: NO ☒ YES _____ Well Number: _____

Sample Crew (Print):

Wayne E. Hunt

Mike Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
	X	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 3\%$)	Stab. Para. ($\pm 10\%$)	Stab. Para. (± 0.1)	Not Applicable	Stab. Para. ($\pm 10\%$)	
1200	X	11.96	0.105	7.51	5.79	61.5	1.3	6 th to Final Field Parameter
1200	X	11.91	0.105	5.95	5.78	61.1	0.9	5 th to Final Field Parameter
1200	X	11.88	0.106	0.37	5.80	59.0	0.8	4 th to Final Field Parameters
1200	X	11.89	0.106	0.46	5.80	57.8	0.7	3 rd to Final Field Parameters
1200	X	11.90	0.106	0.59	5.80	56.8	0.5	2 nd to Final Field Parameters
1200	24.2	11.85	0.107	0.63	5.80	56.1	0.5	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU. Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11354 Calibration Date: 12-11-97 Initials: WE
 YSI SN: 11045 Calibration Date: 12-11-97 Initials: WE

Field measurement protocols followed with no exceptions (Y/N*) Form completed by: Wayne Eklund Date: 12-11-97

*Field Deviations Made: None

Comments Order of Fuel from Well. Logbook # AEL- J23-35K1840F1-0008

-EP 12/12/97



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GROUNDWATER SAMPLING FIELD DATA FORM
Groundwater Monitoring Program / 35K784-10

Plume Area : SD-5 Well Number: 28MW0515
Arrival Date/Sample Time: 12-11-97 / 1205
Sampling Method : Low-Flow Purging and Sampling using a Submersible Pump

Grundfos Redi-Flo 2	Pump # <u>11372</u>	Pump Length <u>200</u>
Grundfos Redi-Flo 2	Dedicated Pump Used: _____	

Weather : light snow, cold, Temp. in 30's

Well Total Depth : 62.77 ft BTOC.
Background PID Reading : 0.0 PPM.
Static Water Level : 47.95 ft BTOC.
Minimum Purge Required : 8.71

Screened Interval : 62.77 - 57.77 ft BTOC.
Well PID Reading : 0.0 PPM.
Pump Set Depth : 60.2 ft BTOC
Total Purge Conducted : 16.2

Analytical Parameters

Collected	Parameters	Method	Preservatives
✓	VOCs	OLC 02.0	HCL to pH < 2
	EDB	USEPA 504.1	None

QA/QC Sampling Sample Duplicate: NO ☒ YES _____ Well Number : _____
 MS/MSD Sample: NO ☒ YES _____ Well Number : _____
 Rinse Blank: NO ☒ YES _____ Well Number : _____
 Field Blank: NO ☒ YES _____ Well Number : _____

Sample Crew (Print):

Wayne EHUND

Mike Nestor

Final Well Purging - Field Water Quality Measurement Table

Purge Rate (gal/min)	Total Purge (gal)	Temp (C)	Sp. Cond. (mS/cm)	DO* (mg/L)	pH	ORP (mV)	Turbidity (NTUs)	Field Parameters
			Subs. Para. ($\pm 1\%$)	Subs. Para. ($\pm 10\%$)	Subs. Para. (± 0.1)	Not Applicable	Subs. Para. ($\pm 10\%$)	
1200 mL/min	X	11.13	0.204	0.19	6.12	0.5	5.3	6 th to Final Field Parameter
1200	X	11.88	0.203	0.14	6.15	-6.3	2.2	5 th to Final Field Parameter
1200	X	11.99	0.203	0.12	6.16	-9.6	1.2	4 th to Final Field Parameters
1200	X	12.15	0.203	0.11	6.16	-11.7	0.9	3 rd to Final Field Parameters
1200	X	12.18	0.202	0.10	6.16	-13.3	0.6	2 nd to Final Field Parameters
1200	16.2	12.18	0.202	0.08	6.16	-14.6	0.6	Final Sampling Parameters

* Note: Turbidity < 10 NTU's stabilization parameters = ± 1 NTU, Dissolved Oxygen < 2 mg/L stabilization parameters = ± 0.2 mg/L.

Field Equipment: PID/OVA SN: 11354 Calibration Date: 12-11-97 Initials: WC

YSI SN: 11645 Calibration Date: 12-11-97 Initials: WC

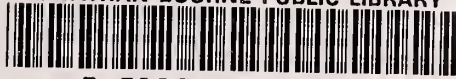
Field measurement protocols followed with no exceptions (Y) N*) Form completed by: Wayne Eklund Date: 12-11-97

*Field Deviations Made: None

-EP 12/11/97

Comments ODOP OF Corel from Well. Logbook # A67-723-35878410-F1-00083

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